THE NATIONAL Provisioner

THE MAGAZINE OF THE

Meat Packing and Allied Industries

Volume 98 Number 2

JANUARY 8, 1938

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ENDURO
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The grinder sets the pace for the entire production of the sausage kitchen. Buffalo Grinders have been the answer for many sausage makers who have made careful studies of production problems and who have found that the valuable time wasted by obsolete, inefficient grinders is multiplied again and again by delays in succeeding operations.

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1019 West 35th Street **CHICAGO, ILL.**

The National Provisioner

THE MAGAZINE OF THE MEAT PACKING AND ALLIED INDUSTRIES

Volume 98 JANUARY 8, 1938 Number 2

MEMBER

Audit Bureau of Circulations
Associated Business Papers

Official Organ Institute of American Meat Packers.

Published weekly at 407 So. Dearborn St., Chicago, Ill., by The National Provisioner, Inc.

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Yearly Subscription: U. S., $3.00; Canada, $4.00; foreign countries, $5.00. Single copies, 25 cents.

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Daily Market Service
(Mail and Wire)

"THE NATIONAL PROVISIONER DAILY MARKET SERVICE" reports daily market transactions and prices on provisions, lard, tallows and greases, sausage materials, hides, cottonseed oil, Chicago hog markets, etc.

For information on rates and service address The National Provisioner Daily Market Service, 407 S. Dearborn St., Chicago.

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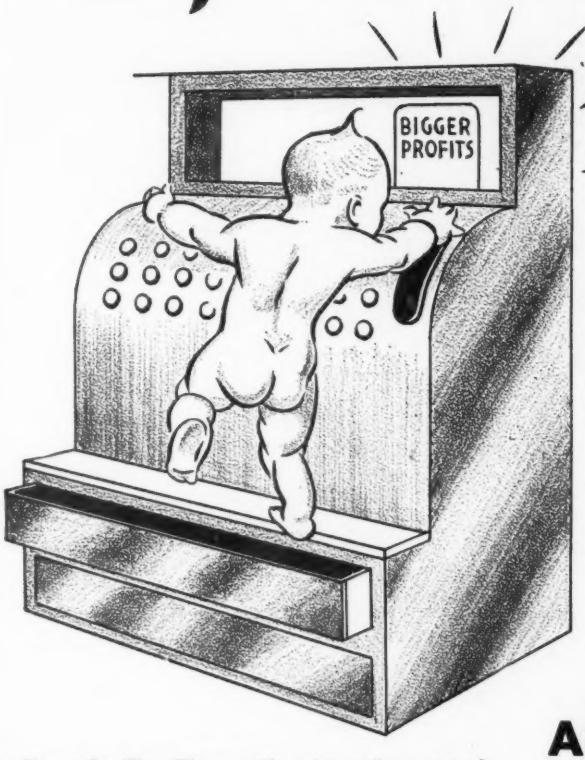
Ring out SHRINKAGE



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WITH BAKER SYSTEM AIR CONDITIONING

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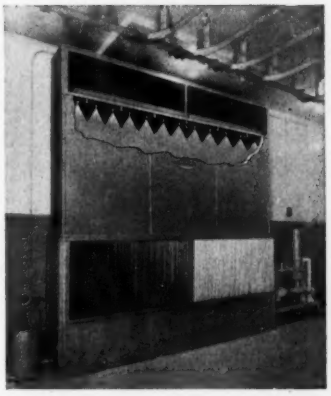
Baker System Air Conditioning is "custom built" to fill the exact requirements of your plant. That's why you'll get extra years of lower-cost, trouble-free service from Baker equipment. Plan now for bigger profits during 1938 by seeing your local Baker representative or writing direct to



Cutaway view of Coldstream Gravity flow type brine spray unit for air conditioning a storage room of 325 carcasses capacity. Products are guarded from early spoilage, mould, slime, or off-color. Note compact space requirements.

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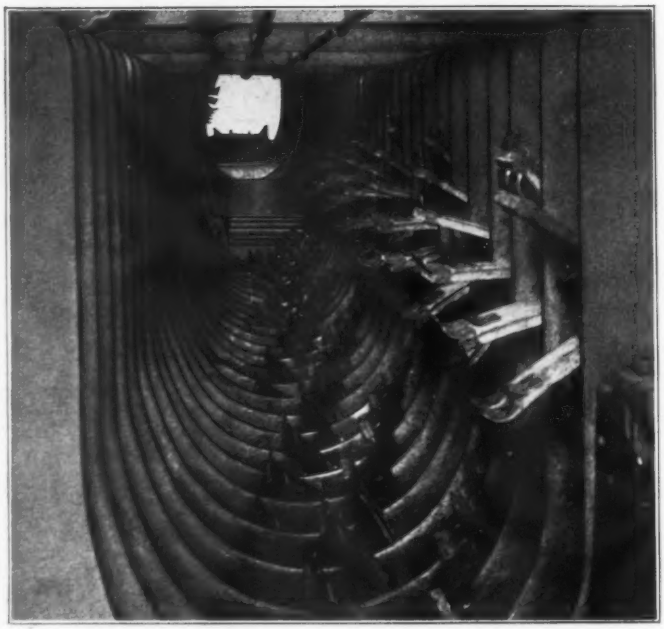
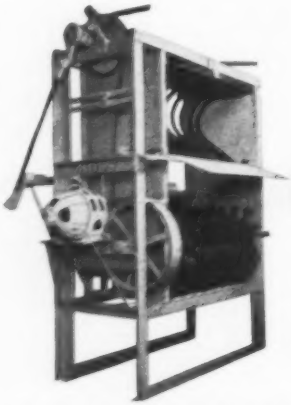
1514 Evans, Omaha, Nebraska • Branch Factories: Fort Worth, Los Angeles, Seattle • Eastern Sales: New York • Central Sales: Chicago • Sales and Service in All Principal Cities.

Authority on Mechanical Cooling for Over 30 Years

ECONOMICAL - EFFICIENT - EFFECTIVE

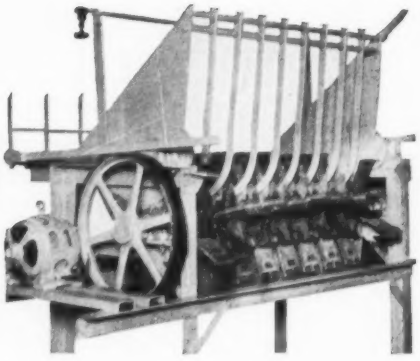
The "E's" that put the "EASE" in Hog Dehairing!





"BOSS" HOG DEHAIRERS

built to suit all requirements.



In the many years that "BOSS" Dehairers have been on the market, they have maintained their lead and still remain unequalled.

And why? Because it is possible to clean hogs so thoroly as to pass the most rigid inspection and at a trivial cost.

In 1937 there were 38 additional "BOSS" Dehairers installed thruout the world

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Mfr. "BOSS" Machines for Killing, Sausage Making, Rendering

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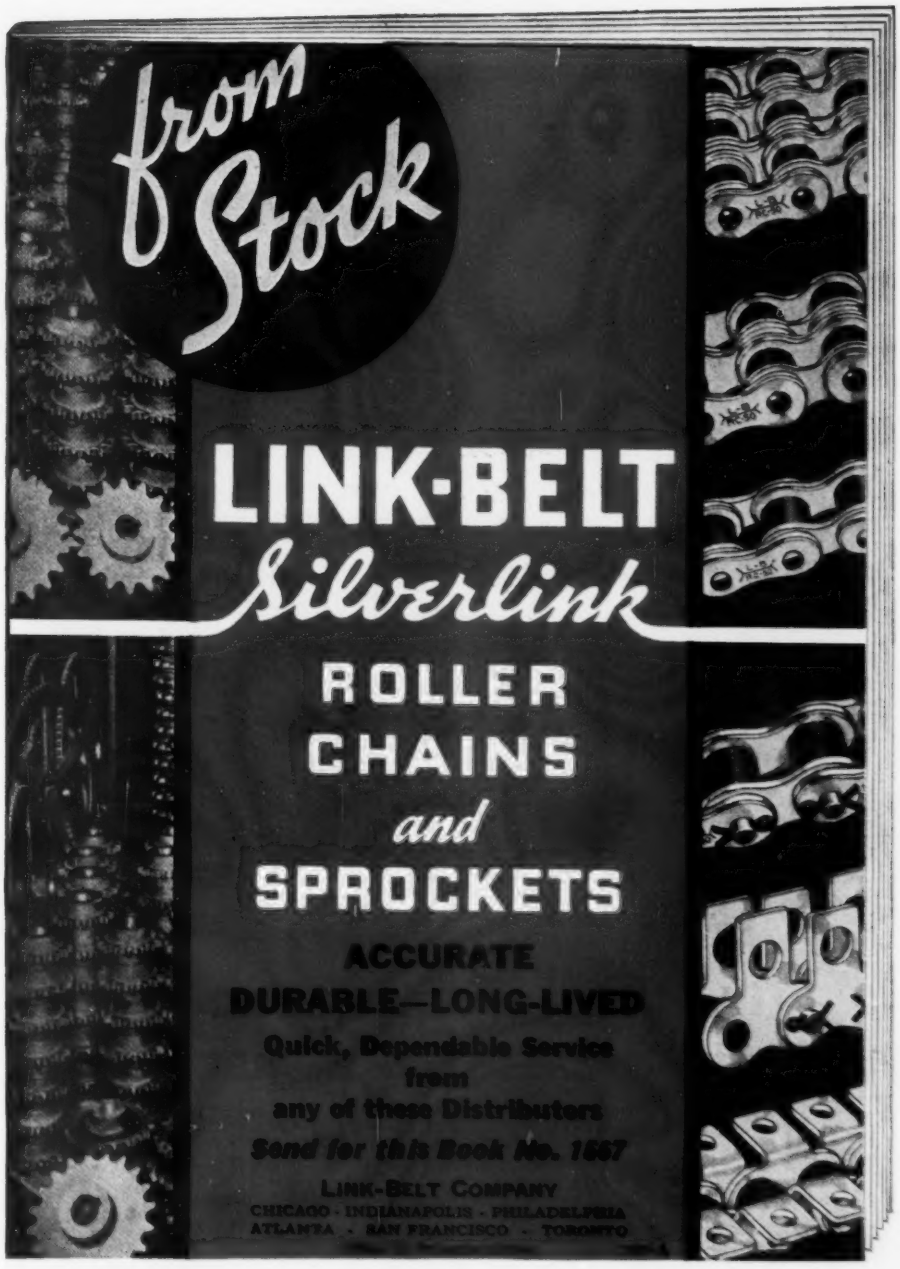

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This delicious clam chowder, exactly as served on the tables of the nationally famous Sea Food Restaurant, is prepared in Hackney's "Wear-Ever" equipped kitchens.

•

Battery of "Wear-Ever" Steam Jacketed Kettles in the kitchens of Hackney's long famous Atlantic City Restaurant—seating capacity, 3,000.

•

"Wear-Ever" STEAM JACKETED KETTLES . . .

SELECTED BY HACKNEY'S

For quality foods that make friends and assure resales, "Wear-Ever" Steam Jacketed Kettles are indispensable. They cannot affect the flavor, taste, color or consistency of your products. The fast heat conduction of Aluminum diffuses heat evenly; assures faster cooking with less fuel; no hot spots, saves time.

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For further information about the economy and efficiency of "Wear-Ever" products, write for our catalog. THE ALUMINUM COOKING UTENSIL COMPANY, Desk 81, 11th Street, New Kensington, Pennsylvania. (*Offices In All Principal Cities*)

WEAR-EVER ALUMINUM TRADE MARK REG. U.S. PAT. OFF.

"Wear-Ever" ALUMINUM

THE STANDARD: WROUGHT OF EXTRA HARD, THICK ALUMINUM

PRAGUE POWDER

Registered U.S. Patent Nos. 2054623, 2054624, 2054625, 2054626

A Sterilized Full Boiled Pickle, Dried to a soft, fluffy salt mass ready to be remade into a second pickle.

Consider Accuracy

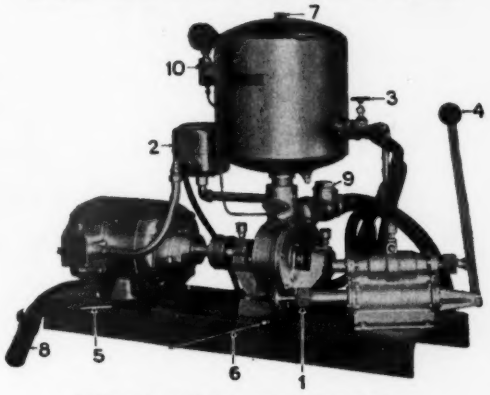
PRAGUE Pickle Balance Scale

This "Prague Pickle balance" is a "percentage" scale. This scale shows you how to place 8%, 9% or 10% of pickle and pickle solids in the Capillary System in every ham you pump. Read the directions. Set the "percentage" arrow and weigh your ham, and likewise weigh the ingoing pickle. Keep your ham dry. Perfection is possible. The Scale makes no mistakes. Watch the red needle—watch the Stop Light.

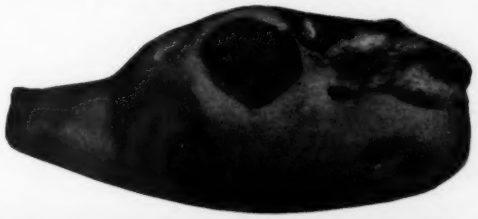
STUDY THIS "Percentage Scale" for a Safety Measure

We Teach the Artery Method of Ham-Curing

"BIG BOY PICKLE PUMP"



8% Pickle added to this Smoked Ham. Smoked 12 hours at 120—12 hours at 130 and 10 hours at 165 degrees—a Tender Ham



ARTERY PUMPING

The "Artery method" of curing is fast finding its place in "Ham Curing Practice" in our own country as well as abroad. Germany is curing 90% of its hams by the "Artery method." Poland is curing the hams sent to America by the "Artery method."

The need for careful pumping is plain to all—8% to 10% is a liberal amount of pickle containing a controlled amount of solids. See pumping pickle on Page 10 of PRAGUE POWDER booklet. Reduce 15% for cover pickle. Common "Mixed Salts" are not suitable for this style cure. "PRAGUE POWDER PICKLE" is the genuine pumping pickle. Reduce the pump strength 15% for cover pickle. Keep coolers at 36° to 38° or 38° to 40° for 7-day cures. The pumping pickle should be prepared to make positive contact in the capillaries.

We have found and you have been convinced that "Artery Pumped Hams" sell faster than old style cured Hams. The housewife likes the "tender juicy Ham or Picnic." 90% of the Ham curers are taking over the "Prague Pickle Artery Pumping Style." You may be tempted to hold back. You may be tempted to use the spray needle and stick your ham full of holes and let the spray pocket soak out. Do not do this. You lose out to "fast thinking and fast acting men." Artery pumped hams suit public taste. The housewife demands tender hams. If you desire a "Ready to Eat" Ham, smoke at high temperature.

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WANTED

Our group of research chemists and engineers, whose successful packages are already in nearly every home in the land, is looking for some new and tough jobs to solve. Problems in food protection papers particularly solicited. Will not give up until they know the answer. Address problem to Kalamazoo Vegetable Parchment Co., Parchment, Kalamazoo, Michigan.

STANGE

climaxes a year of achievement and pledges equal effort to progress in 1938

Among STANGE'S customers are many of the most progressive concerns in the meat packing industry. These concerns have been STANGE customers because of the high quality and dependable uniformity of Stange Products—and they have remained STANGE customers because of the progressive company behind those products.

As an example of STANGE Progress, look at 1937. This year marked the introduction of ***Stange Curing and Nitrite Tablets,*** the revolutionary developments in curing materials that took the guesswork and mystery out of curing operations. ***Peacock Brand Casing Colors*** were made available in tablet form, thus giving closer control and substantial economies in color costs. For the first time these two products made it possible to say ***"If you can count you can't go wrong!"***

Dry Essence of Natural Spices, the truly modern seasoning material, made available in new, perfected seasoning blends. These blends increase the flavor appeal of Stange Seasonings, multiply their scope, make them more perfectly adapted for all sausage and specialties.

The meat packing industry has been quick to accept these ***added*** links in the Stange chain of progress. The widespread acceptance of Stange products made it necessary to ***double*** the capacity of the Stange plant in 1937—furnishing strong proof that more and more packers and sausage manufacturers are swinging to STANGE. ***It will pay you to do the same!***

WM. J. STANGE COMPANY

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THE NATIONAL PROVISIONER

The Magazine of the Meat Packing and Allied Industries

JANUARY 8, 1938

GOOD OUTLOOK for MEAT PACKING

More Livestock, Stabilized Costs Gradually Improving Outlet Ahead

LOOKING back over 1937 and previous years it is realized that meat packers have made extensive adjustments in their business to meet changing conditions. They have adjusted themselves to very wide fluctuations in raw material supplies; they have absorbed heavy additional costs; they have geared their income to markedly increased taxes of many kinds.

Looking forward to 1938 and succeeding years they find themselves ready to go ahead. Their prospect is for increased livestock supplies, for no material changes in labor costs and for a gradually improving market for the meats and by-products they produce. The low spot of the closing months of 1937 promises to give way to an upward trend in 1938.

Packers have plenty of "hindsight" for use in solving any problems which may arise in the year just begun.

A Packer Achievement

"Perhaps few individuals outside the agricultural industries realize what an achievement meat packers have made in adapting their business to changing circumstances," says president Wm. Whitfield Woods of the Institute of American Meat Packers, in commenting on the status of the industry at this time. "The drastic changes in supplies of livestock and fluctuations in prices which have occurred during recent years have created tremendous problems—but the industry has met them successfully."

Speaking of increased operating costs and their influence on 1937 industry earnings, Mr. Woods says that "increases in wages made by the industry in the last meat packing year would be equal in one year to the profits of the entire industry in a normal year."

The difficult problems created by shifts in volume, changes in prices and sudden rise in operating costs are readily apparent. "But notwithstanding the gravity of these problems, the industry has been able to adjust itself to them," says Mr. Woods. "I believe this to be an outstanding accomplishment."

The Makings of Prosperity

Business generally—and meat packers in particular—"have all of the things which are the warp and woof of prosperity," says president Robert H. Cabell of Armour and Company, in looking forward to 1938. "We have all of these things, regardless of what may be happening currently in the fields of diplomacy, politics and finance. If as a nation we could just keep our eyes on the fundamentals, we could always be busy and prosperous."

Too much importance, says Mr. Cabell, is given to matters which weigh heavily at the moment and are not very significant in the long run.

"I look forward to 1938," says he, "with the belief that it can be made a good year, that it holds opportunity for business to prosper, that results hinge more largely upon our own efforts, enterprise and initiative than they do on the kind of legislation that may come out of Washington. If we trim our sails to the winds that are blowing, if we watch our steering and keep a sharp lookout, we will make progress in the right direction."

Watching the Trends

Winds are blowing strongly in the direction of greater cooperation between government and busi-

ness, and better relationship between employers and employees. Another wind which is blowing strongly, and which shows no sign of letting up, says Mr. Cabell, has to do with new conceptions of the social obligations of government and of business.

These are winds to which business sails must be trimmed, winds which are being taken into account in plans which have been and are being laid for profitable operation of business.

Most optimistic of all outlooks is to be found in the basic wealth produced from the soil in the form of abundant feed crops and plentiful supplies of livestock. Last year was a good crop year, and farmers turned to the production of more livestock to utilize these crops. This means a more plentiful supply of meat, furnishing a volume which reduces costs and makes possible the purchase of meat by every income group.

Packing Industry Outlook

HOGS.—The meat packing industry can look forward to a gradually increasing hog supply in 1938. The fall pig crop of 1937 was considerably larger than that of the fall of 1936. There was no need—as was the case a year ago—to force immature and unfinished animals on the market, to say nothing of breeding stock because of insufficient feed.

Indications point to a material increase in the spring pig crop over that of a year earlier, and to a market hog supply throughout the calendar year 1938 well above that of the past few years.

CATTLE.—Slaughter of cattle and calves in 1938 will continue large, although smaller than the kill of the near-record years 1937 and 1936. Number of steers slaughtered may be about the same as in 1937, but with a good many more showing finish as a result of plentiful feed. Slaughter of she stock and calves may be smaller, as there is a trend toward replenishing herds and because present prospects do not point to the need of disposing of breeding stock for lack of feed. Average weight of cattle probably will be heavier, which will offset in part any decrease in numbers.

Thus the 1938 beef supply can be expected to approach that of 1937, and to be generally higher in quality.

LAMBS.—Lamb and sheep slaughter in 1938 is expected to show little change from that of recent years, when somewhere in the neighborhood of 17,000,000 head of sheep were slaughtered annually under federal inspection.

More Pork and Beef

Both hog and cattle numbers are expected to show an upturn during the coming three years, given a normal feed supply. The U. S. Department of Agriculture says it seems probable that January 1, 1938, will mark the low point of the present cattle number cycle, and that in the next three years beef is expected to continue to represent a larger-than-average proportion of the total meat supply. It also predicts a rather marked increase in hog production during the next three years.

Meat packers entered their new fiscal year on November 1, 1937, with the lowest meat and lard stocks of record. They were in an unusual position to adjust business to a price fluctuation or to an increase in livestock supplies. Their high-priced inventories were well worked off, in spite of losses that had to be assumed on pork meats in the closing months of the year.

Consumer Demand

Much is said about decreased buying power in 1938 and increasing unemployment. Some of this is actual and some of the playup of this phase of prosperity or the lack of it is political.

At any rate, the meat packer knows that if he has the raw material the volume of his business goes on, regardless of the general prosperity, and though he may experience sharp price fluctuations. While unemployment is believed to have increased, it is true that many more millions are employed than unemployed. Both employed and unemployed eat meat, and the meat supply of 1938 will not exceed these needs. It would appear, therefore, that all types of pocketbooks will be available to purchase all grades of meat and all classes of meat cuts.

Needs Sound Merchandising

Sound merchandising should assure satisfactory turn-over for every meat packer during the year, but there may be little place for any type of speculative effort.

Once again, therefore, in the words of Mr. Cabell, "if we can escape the hysteria that comes with changing conditions—if we can just go along doing our day's work the best way we know how—if we can look back over the past and realize that progress and prosperity move ever upward despite occasional dips—if we can just have confidence in ourselves and our fellow men—then the year 1938 will come and go and find us better off than we were before."

MODERNIZE to Save the MARGIN

★ Packers Learn That Costs Can Be Reduced by Efficiency in Operation and Distribution

THERE was evident among packers during all of 1937 a constructive disposition to make capital expenditures whenever it was believed that lower costs, improved product, a reduction in waste and loss, or improvement in merchandising position would result.

The rather difficult years prior to 1936 impressed on packers as nothing else could have done the value of up-to-date and efficient production and merchandising facilities when the spread between cost and selling price is very narrow or non-existent.

To be handicapped at such a time by low labor efficiency, high costs and waste imposes a handicap frequently impossible to carry, and which the packer can get out from under only with the greatest difficulty.

Costs and Profits

The packer's margin spread is narrow under the best of conditions. It is continually influenced by conditions and situations tending to reduce it by adversely affecting both costs and prices.

If this margin could be maintained by the simple process of raising prices the problems of cost and volume would be relatively unimportant. Unfortunately, selling prices are largely beyond the control of the packer. They are dictated by livestock supply, consumer purchasing power, availability and prices of competing foods—and quite often in a particular territory by the cost of production in the most efficient plant in that territory.

A general increase in cost is often reflected in prices. But each rise in price makes it impossible for a certain income group to buy meat or makes it necessary for them to purchase it less frequently. Volume is thus reduced—and volume is a requirement for a reasonable return on the investment when the profit spread is narrow. When costs increase, therefore, often the packer's only recourse is to try to offset increases by economies in other directions.

Early in 1935 it became increasingly evident that the meat packing industry could expect higher costs in the way of added tax burdens, higher wages and more costly livestock and supplies. While it was hoped that increased consumer buying power and greater per capita meat consumption would take up some of the slack, it was not expected that consumption would increase materially, in view of the short livestock supply.

Inefficiency a Handicap

The effort to maintain the profit spread in view of this situation was mainly responsible for the construction and rehabilitation activity which got well under way in 1936 and carried over into 1937.

There is considerable evidence that large capital expenditures for new plant and equipment will continue throughout 1938. This is predicated on the opinion that costs will continue to increase, and that there is added incentive for modernization because the packer whose operations are inefficient is under a distinct handicap in competition with modern, efficient plants.

Because of the short supply of hogs the attention of heretofore exclusive pork packers has been focused on the possibilities in the beef business. Some of these extended their operations to include cattle slaughter, for which new buildings and facilities were required. Some new exclusive beef plants were constructed during the year. This activity in beef, which started in 1935, continued through 1936 and 1937 and was a factor influencing capital investments in the latter year.

If there is any conclusion to be drawn from the heavier-than-usual investments in plants and equipment during 1936 and 1937 it is that the idea of greater profits through more efficient operations has taken hold in the meat packing industry. Savings through economical plant operation, modern construction and up-to-date equipment—both in processing and distribution—have been proved in practice. It may be expected, therefore, that there will be continued efforts in 1938 to reduce production costs by improving efficiencies through capital investment for modernization.

Building in 1937

PLANT construction and rehabilitation in the meat packing industry continued active during 1937. Estimates by architects and engineers place total expenditures for new plants and additions somewhat below that of the previous year, but above what might be considered normal. A number of rather large plants were constructed, and there were numerous plant additions and reconstruction jobs.

The story of plant construction and

BEEF PLANT OF ESTHERVILLE PACKING CO.

One of the modern packinghouses constructed during 1937. It has a capacity of 30 cattle per hour and was designed and constructed to obtain high processing efficiency.

ONE OF THE SOUTH'S NEWEST AND FINEST PACKING PLANTS

Plant of Georgia Packing Co., Thomasville, Ga., formally opened in August, 1937. It has a capacity of 20 head of cattle and 80 head of hogs per hour.

additions in the meat packing industry during 1937 is too long to tell here in detail. Only some of the highlights will be sketched, therefore, to indicate the manner in which packers continue to expand and improve their facilities and how they are making capital investment to improve their merchandising position and make greater profits through savings in operating costs.

Growth in the South

The growing importance of the South as a livestock producing section continued to be reflected by packinghouse construction and improvements in that area.

Two important packinghouses were constructed in the deep South during the past year—the Swift & Company plant at Lake Charles, La., and the Georgia Packing Co. plant at Thomasville, Ga. The Swift plant, which will draw cattle from Louisiana, was estimated to have cost $500,000, with equipment. Plant of the Georgia Packing Co. has a capacity of 20 cattle and 80 hogs per hour and 12,000 lbs. of sausage per day.

Cudahy Packing Co. made improvements to its Albany, Ga., plant, constructed last year, costing approximately $60,000. These included a dry storage building, additions to the stockyards, and installation of an air conditioning system in the office building.

Other Southern Improvements

Additions and improvements to the Columbus, Ga., plant of Wilson & Co. required the expenditure of $150,000.

White Provision Co., Atlanta, Ga., constructed a new lard storage building.

A sausage making addition was constructed at the Norfolk, Va., branch of the Cudahy Packing Co., and in Richmond, Va., the branch of the Wm. Schluderberg-T. J. Kurdle Co. was remodeled and a meat canning department installed.

Tulsa Dressed Beef Co. constructed a new plant costing $35,000 at Tulsa, Okla. It has a capacity of 125 cattle per day. Other construction work in Oklahoma during the year included a new plant by the Hallon Packing Co. at Poteau, with a capacity of 1,500 lbs. of sausage daily and the new plant of the Smith Packing, Ada, with a capacity of 200 cattle per week.

A cooler building 50 by 50 ft., employees' locker rooms and a new loading dock were constructed by the Morgan Packing Co., Tuscaloosa, Ala.

MODERN BRANCH HOUSE

Morrell's Gansevoort branch in New York City, placed in service early in 1937. Building is 50 by 100 ft., four stories high and constructed of white Bedford stone. Interior is finished in glazed tile, with stainless steel and plate glass much in evidence. Building designed by H. P. Henschien.

In Tennessee and Texas

A fireproof cooler building 60 by 79 ft. was constructed by C. Finkbeiner, Pine Bluff, Ark.

In Tennessee Abraham Bros. Co. of Memphis and the Lay Packing Co. of Knoxville constructed plant additions and improvements costing $15,000 and $10,000 respectively. In the latter city, also, the East Tennessee Packing Co. completed and placed in operation a 3-story, fireproof cattle killing building.

Considerable meat plant construction work was completed in Texas during the year. Among the more important of these jobs were those of the Roegelin Packing Co. and the Ed. Auge Packing Co., San Antonio, Tex., and the new plant of the Wickham Packing Co., Kilgore, Tex., which has a capacity of 500 cattle and 1,000 hogs weekly and cost $85,000. Neuhoff Bros., Dallas, constructed a new plant costing $140,000.

New Plant in Iowa

A new cattle slaughtering plant—Estherville Packing Co., Estherville, Ia.—was added during the year to the roll of Iowa packinghouses. In addition to being one of the latest to be placed in operation, it is also one of the most modern. It has a capacity of 30 cattle per hour. A description of it will be found in the November 13, 1937, issue of THE NATIONAL PROVISIONER.

Rath Packing Co., Waterloo, Ia., completed plant modernization started several years ago. During 1937 a large 2-story warehouse was erected which in time will be brought to the full height of the adjoining buildings. In the same period the last of the original buildings of the plant was removed and a new, modern 6-story building was erected in its place.

John Morrell & Co., Ottumwa, Ia., constructed a 3-story addition, 60 by 160

TENNESSEE PACKER MODERNIZES TO CUT COSTS

Addition at left is new beef building, in which slaughtering is done on top floor. East Tennessee Packing Co. has had a rebuilding and modernization program under way for several years.

ft. to the pork cutting building as well as completing many minor plant improvements designed to improve production efficiency. This company also built new stock yards at its Topeka plant.

Equips to Generate Power

In Minnesota a modern, fireproof beef building and a boiler building and turbine building were added to the Albert Lea plant of Wilson & Co. Superior Packing Co., St. Paul, installed a Diesel engine for generating power and constructed a cooler building 44 by 80 ft.

Thirty thousand dollars was spent by the A. E. Klubninkin Packing Co., Los Angeles for additions to increase killing and cooling capacity. In the same city Cudahy Packing Co. invested $85,000 for a 3-story and basement building. Wilson & Co. and the Southern California Meat Co. added cooler buildings to their Los Angeles plants.

A plant which is said to be one of the most modern for its size and which contains many innovations in construction and design was completed during the year for the Platte Valley Packing Co., Scottsbluff, Neb. Building covers a ground area of 132 by 176 ft. Approximately $200,000 was expended for plant and equipment.

Another Nebraska plant constructed during the year and worthy of note is that of the Nebraska Beef Co. at Omaha. It has a capacity of 125 cattle daily and cost $125,000.

More New Plants

There was also completed during 1937 the $1,000,000 pork building addition to the Armour Omaha plant. This project, started in 1936, was the largest to be placed in operation in the meat packing industry this year.

In addition to the foregoing projects there were started or completed during the year many other meat plant construction and improvement jobs. Some of these necessitated the expenditure of sums totaling six figures; others were less important. In the aggregate, however, they represent a huge investment in buildings and equipment. Among these were:

Peter Eckrich & Sons Co., Kalamazoo, Mich.—New sausage manufacturing plant.

Meyer Kornblum Pkg. Co., Kansas City, Kans. — Two-story killing and processing building, 56 by 104 ft.

Hygrade Food Products Corp., Buffalo, N. Y.—Three-story addition to the by-products building; $25,000.

F. W. Smith Provision Co., Winfield, Kans.—New sausage kitchen.

A. F. Schwahn & Sons Co., Eau Claire, Wis.—Sausage manufacturing plant with a capacity of 150,000 lbs. of sausage daily.

Adirondack Packing Co., Malone, N. Y.—Meat packing plant.

Cudahy Packing Co.—Two story and basement addition to the South Chicago branch; $30,000.

Wilson & Co., Utica, N. Y.—Three-story annex, 24 by 120 ft., to branch house; $50,000.

Many Packers Modernize

Drovers Packing Co., Chicago, Ill.—Plant addition and boiler room modernization.

Warsaw Sausage Mfg., Cleveland, O.—New plant.

Milwaukee Sausage Manufacturing Co., Milwaukee, Wis. — Refrigerated storage room.

Hill Packing Co., Topeka, Kas.—One-story by-products building.

Chitwood Packing Co., McCook, Neb.—Spray pond of 25,000 gal. capacity.

Swift & Company, Montgomery, Ala.—Four-story branch house; $35,000.

W. E. and M. M. Atkinson, Fergus Falls, Minn.—New rendering plant.

New Branch Houses

Armour and Company, Williamsport, Pa.—Branch house.

Swift & Company, Jackson, Mich.—Branch house.

Armour and Company, Cincinnati, O.—New branch and sausage kitchen; one story; 60 by 120 ft.

Swift & Company, Ocala, Fla.—New plant with a capacity of 600 cattle per week.

Armour and Company, Boston, Mass.—New branch house.

Armour and Company, Rochester, N. Y.—New branch house.

Peekskill Packing Co., Peekskill, N. Y.—New plant; 50 by 100 ft.; two stories and basement.

Swift & Co., Newark, N. J.—Edible oil refining and shortening plant; $750,000.

Wilson & Co., Brooklyn, N. Y.—New branch house.

Swift & Co., Champaign, Ill.—Soy bean crushing mill.

John Morrell & Co., New York City.—New branch house.

C. Lehmann Packing Co., New York City.—New branch house.

Added Facilities

Essem Packing Co., Lawrence, Mass.—Two-story plant addition.

Neninger Packing Co., Cape Girardeau, Mo.—New hog slaughtering department.

(Continued on next page.)

PROCESSING DEVELOPMENT

The adhesive method of depilating hogs was an outstanding development of 1937. It improves product and has enabled packers to make substantial savings on the dressing rail. (Photo Allbright-Nell Co.)

Roegelein Provision Co., San Antonio, Tex.—Beef slaughtering plant.

Schweitzer & Co., San Francisco, Calif.—New beef plant.

Greenhouse Bros. & Finkelstein, Syracuse, N. Y.—Addition to beef coolers.

Lewis Bros., Corvallis, Wash.—New abattoir.

Swift & Company, Wilkes Barre, Pa. —Two-story branch; $88,650.

Linden Packing Co., Linden, N. J.— Three-story plant addition at a cost of $30,000.

No attempt has been made in the foregoing compilation of new packinghouse construction, rehabilitation and modernization jobs during 1937 to give a complete list. To do so would require more space than is available in one issue of THE NATIONAL PROVISIONER.

New Processing and Equipment Ideas

DEVELOPMENT of the method for producing "ready-to-eat" smoked hams was perhaps the most important contribution made to meat processing during 1937. This product is just what its name implies—a smoked ham cooked during processing and sold ready to eat cold or after warming.

New Ham Process

Processing methods for making this ham vary in different plants. Usually the ham is artery pumped, cured in from 7 to 14 days and cooked in the smokehouse during smoking. Theory of the process is simple, but care and close control of all operations are required for uniform quality products. (Methods of processing ready-to-eat smoked hams were described in the May 22, 1937, issue of THE NATIONAL PROVISIONER.)

A frankfurter which loses its casing during cooking was another development during 1937. This frank is stuffed in an artificial casing, which is perforated longitudinally after smoking and cooking and just previous to packing.

When the frankfurter is cooked in boiling water the meat swells and splits the casing along the line of perforations, leaving a skinless frank for serving. In the Boston territory—where this frank was first offered for sale—it has met with very favorable consumer acceptance and its volume is reported to be growing rapidly. A simple machine for perforating the franks at a very small cost was also developed.

POPULAR NEW PRODUCT

Process for making ready-to-eat smoked hams was developed during 1937. The product quickly became popular with consumers and is now made by many packers.

Hog Dehairing Improvement

Judged from labor saving and product improvement standpoints, the adhesive method of removing hair stubble from hog carcasses would seem to rank as one of the most important equipment developments of the year. This method and the equipment for dipping the hog in the adhesive, described in the September 11, 1937, issue of THE NATIONAL PROVISIONER, eliminates shaving operations and their cost, speeds up slaughtering, increases the lard yield per hog, reduces knife damage and aids in the production of carcasses and cuts free from hair stubble and scurf. General adoption of this method of cleaning hogs has been predicted.

Other new and improved equipment and supplies announced during the year included—

Other Equipment Developments

1.—Carcass Dropper. — Cincinnati Butchers Supply Corp.

2.—Equipment and Methods for Cleaning Beef Rounds.—Allbright-Nell Co.

3.—Aluminum Smoke Stick.—Aluminum Cooking Utensil Co.

4.—Improved Lard Measuring Filler. —Allbright-Nell Co.

5.—Curing and Casing Color Tablets. —Wm. J. Stange Co.

6.—Pickle Balance Scale.—Griffith Laboratories.

7.—Small Size Dry Melter.—John J. Dupps Co.

8.—Chilling Needle for Preventing Sour Beef Rounds.—John P. Malone and Adam Young.

9.—Solvent Rendering System.—John J. Dupps Co.

10.—Truck Refrigerating System Using Natural Ice.—Air Induction Bunker Corp.

11.—New Method of Using Charcoal Briquettes in Smokehouse.—Ford Motor Co.

12.—Improved Grinder Plate and Knife.—Specialty Manufacturers Sales Co.

13.—Shredder and Washer.—Cincinnati Butchers Supply Corp.

TEST YOUR PORK SCALES

How often do you test the scales in your pork department? Read "PORK PACKING," The National Provisioner's latest revision of "The Packers' Encyclopedia.

Power Plant Modernization

THE return from an investment in packinghouse boiler and engine rooms to generate power as a by-product of the processing steam demand is frequently 30 per cent or more. A 20 to 25 per cent annual income is invariably made. In a few instances packers have made savings in steam and power costs sufficient to pay the entire cost of power plant modernization in two years.

With the power plant offering a greater opportunity for savings than any other department in the packinghouse, it is to be expected that there will be an increasing appreciation among packers of the folly of purchasing all power for equipment operation.

More Improvement Ahead

Power plant modernization has accounted for a considerable capital investment in the meat packing industry for several years. Despite this, however, few meat plants have modern, efficient boiler and engine rooms. Engineers are confident, therefore, in view of the saving possibilities in modern by-product power plants, that the curve of capital expenditures by packers for boilers, engines, turbines, coal and ash handling equipment and other auxiliaries will continue upward for many years.

Modernization Continues

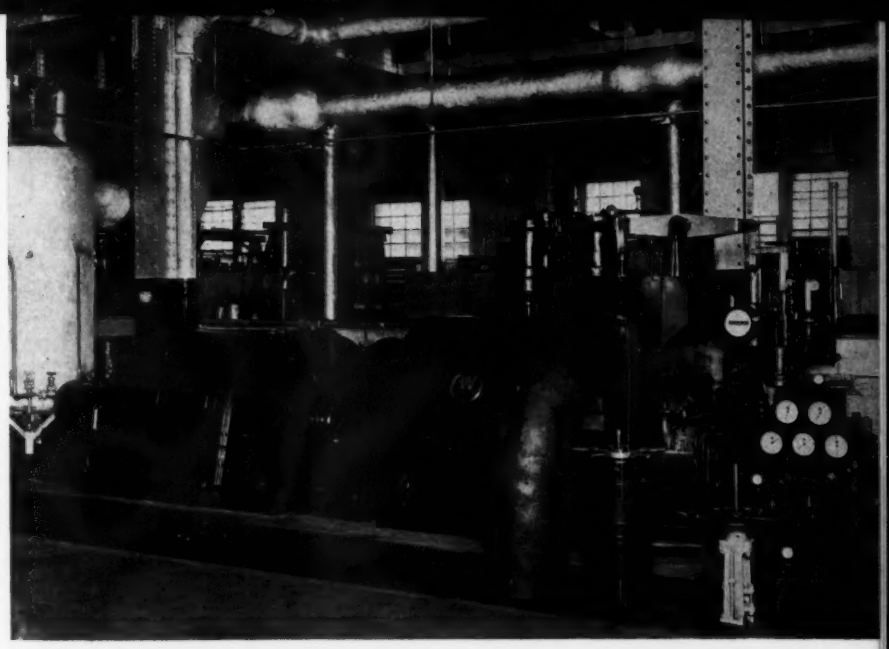
Several packers built modern power plants during 1937 and others partially modernized their power departments as the first step toward generation of power as a by-product of the processing steam demand.

The largest by-product power plant placed in operation in the meat packing industry last year—a job costing well into six figures—is in the Albert Lea, Minn., plant of Wilson & Co. Equipment includes three 500 h.p. boilers, constructed to operate at a steam pressure of 300 lbs. and to burn powdered coal, and three turbo-generators of 1,500 k.w., 1,000 k.w. and 500 k.w. capacity respectively. Boilers are equipped with full automatic controls. Two new structures—a four-story and basement boiler building and a one-story turbine building—were constructed to house the equipment.

Kingan & Co. placed in operation early this year its 2,000 k.w. extraction turbine which generates power for plant operation with steam at 225 lbs. pressure, 150 degs. superheat, steam purchased from a nearby public utility station.

Morrell Power Plant

Last year John Morrell & Co., Ottumwa, Ia., placed in service a new boiler constructed to carry a working pressure of 450 lbs. which, it was announced at that time, was the first step in a set-up to generate power as a by-product of the processing steam demand.



SOON PAYS FOR ITSELF

Non-condensing, double-extraction type turbine which generates power for equipment operation in the plant of Kingan & Co., Indianapolis, Ind. Equipment such as this frequently saves enough to pay installation cost in from 2 to 4 years.

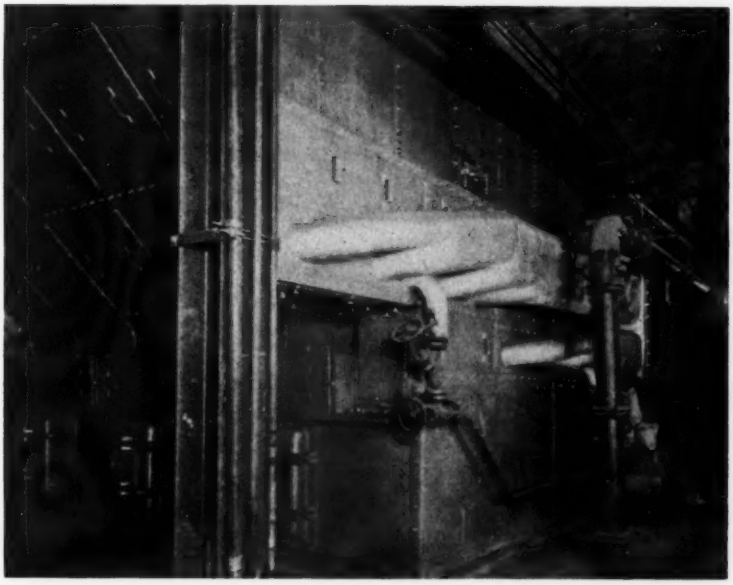
The second step toward this end was made this year, when a 2,500 k.w. extraction type turbine was installed and placed in operation.

Nuckolls Packing Co., Pueblo, Colo., started on the road to by-product power generation by installing a 300 h.p. Stirling type boiler built to operate at 325 lbs. pressure. Generating equipment—probably an extraction type turbine—will be added later to bring the power plant up-to-date, it is understood.

Drovers Packing Co., Chicago, continued its program of power plant modernization by placing a new 125 h.p. boiler in service.

Superior Packing Co., St. Paul, Minn., installed a Diesel engine with which to generate all the power required for operation of plant equipment.

In other packinghouses where power plant modernization work was carried



BY-PRODUCT POWER INSTALLATION

Among packers who have equipped to generate power as a by-product of the processing steam demand is John Morrell & Co., Ottumwa, Ia. Turbine was placed in operation during 1937. The boiler (shown here) was installed in 1936. It is constructed for a steam pressure of 450 lbs.

on improvements were confined to auxiliary equipment to better efficiency and lower costs, including automatic controls, coal and ash handling equipment, indicating and recording instruments, etc.

Forecast of the Future

The savings possibilities in generating power in the meat plant as a by-product of the processing steam demand (20 to 50 per cent annually) precludes the possibility of any considerable yearly reduction in investments in modern power plants.

In a recent survey by THE NATIONAL PROVISIONER 28 per cent of all packers contacted indicated they will install power generating equipment in their plants during the next five years. If half of these go through with their intention, a huge capital investment in boiler and engine room will be required.

The important need at the present time to encourage greater interest in packinghouse power plants and the money to be saved by modernizing them is a greater packer knowledge of the theory and practice of steam and power generation, and better facilities for obtaining accurate steam and power costs and operating data.

Processing Control

SCIENTIFIC investigations have established the fundamental principles on which production of quality meat products depend. The problems of the packer and sausage manufacturer, therefore—so far as production is concerned—are not so much due to a lack of available information, but lie in applying his knowledge and exercising control required for uniform results.

We may expect, therefore, that increasing application of automatic controllers and recording instruments will be made to meat plant processing operations, and that better use will be made of familiar devices and tools to eliminate guesswork and minimize the hazards inherent in entire dependence on the human element.

More extensive application of control instruments in packinghouse boiler and engine rooms is also a need that must eventually be met. This is particularly true of CO_2 meters, only through the use of which can coal be burned most efficiently, and of flow meters, which are necessary for accurate steam and cost accounting.

Product Handling

IMPROVED methods of handling product through the various processing operations and between departments in the meat packing plant offer an opportunity for labor and cost savings that must soon be given more consideration by packers. Mechanical handling equipment is available for solving any meat plant transportation need. The packer's problem of cutting non-productive labor expense in processing and manufacturing departments, therefore, largely simmers down to adapting this equipment to products and locations.

Pneumatic systems for transporting blood, cracklings, material designed for the rendering tanks, etc., should and undoubtedly will be more generally used.

Gravity and slat conveyors in curing cellars, cured meat soaking and washing rooms, assembly and shipping rooms and on loading docks make savings that very frequently are sufficient to return the investment in a very short time.

Overhead conveyors for handling gambrel sticks and trolleys from hog cutting room to cleaning department have materially cut transportation and handling costs in many plants. These conveyors will be more generally installed.

Interdepartmental transportation of products in the packinghouse has not received the thought and study the potential benefits would seem to justify. Its consideration should not be longer delayed.

Clean-up and Maintenance

THERE are many costs and expenses required in operating a meat packing plant—cost of livestock, for example—over which the packer has little or no control. But there are numerous others which are often influenced up or down in proportion to the thought and study given to their control. Included in the latter classification are cleaning and maintenance costs.

Installation of improved steam cleaning equipment and more liberal use of non-corroding metals and aluminum for tables, benches, equipment, tools and utensils, may be expected in 1938, because there is a real need to cut non-productive plant costs, and because the savings to be made are sufficient to yield a large return on the investment.

Conditions unfavorable for securing a satisfactory paint job in many departments of the packing plant have generally discouraged a policy of frequent painting to prevent or reduce deterioration of wood and steel. Air conditioning in coolers, processing and manufacturing departments—by maintaining dry walls, ceiling and steel work—affords the packer the opportunity to use paint liberally to improve lighting and working conditions and reduce the cost of maintaining buildings in first-class condition.

VISKING PATENT HELD VALID

By a consent decree entered in the U. S. district court, U. S. patent No. 1,959,978, covering printed cellulose casings and sausages processed therein —the invention of Erwin O. Freund— has been held valid and infringed by Transparent Package Co. Cases against several packers have been dismissed, and Visking Corporation has granted Transparent Package Co. licenses under this and other patents.

DECEMBER MEAT TRADE

Virtually every grade and class of meat and live stock declined somewhat in price during December, the Institute of American Meat Packers points out in a review of the meat situation. Following slow but steady declines throughout most of December, wholesale prices of fresh pork at the close of the month were from 3 to 16 per cent lower than at the opening, and at levels from 40 to 52 per cent lower than the peaks which prevailed at the middle of September. Wholesale prices of all grades of beef were lower at the end of December than at the beginning, with beef from the better grades showing sharp declines. Dressed lamb was from 15 to 20 per cent lower and veal declined from 7 to 10 per cent.

With lower meat values, all grades and classes of livestock moved steadily lower throughout December. At the close of the month hogs were 6 per cent lower than at the opening, and cattle were from 6 to 21 per cent lower, depending on grade and weight. Lambs decreased about 13 per cent during the month and calves from 3 or 4 per cent.

Holiday trade in the United Kingdom offered some stimulus to the demand in that market and a good quantity of hams and lard moved into consumption at somewhat better prices than those of the previous month. Although this demand was good, realizations were somewhat under those in the domestic market. Heavier supplies and an accumulation of stock had a tendency to depress the market somewhat. During the early part of the month there was a good demand for lard and prices were on a parity with those on the domestic market. However, during the last ten days, prices declined to a level somewhat below parity. On the Continent there was some improvement in the demand for lard in Czechoslovakia. Otherwise, conditions there remained unsatisfactory.

In the domestic market, wholesale prices of fresh pork loins moved downward during December. Prices of Boston-style butts maintained a fairly steady level throughout the month. Spareribs were somewhat lower. There was a good demand for smoked hams and a fairly large volume moved into consumption to take care of the holiday trade. There was a fair demand for bacon, prices changing little except that heavy weights tended lower. Demand for picnics was fairly good and prices showed little change. Lard trade was good, prices changing very little until the end of the month, when they moved slightly lower.

Wholesale prices of most grades of beef dropped during December, with the sharpest declines occurring in the better grades which at the close of the month were from 12 to 23 per cent lower than at the opening. Wholesale prices of veal declined from 7 to 10 per cent. Dressed lamb prices moved slightly lower throughout the month. At the close of December, wholesale prices were about 16 per cent lower than at the opening.

Refrigeration and Air Conditioning

AIR conditioning as an effective means for providing better working conditions, improving labor efficiency, maintaining quality of products and reducing shrink and deterioration of meat in storage and during processing continues to be an important factor contributing to a considerable capital expenditure by packers each year.

Air conditioning in the meat packing plant is definitely tied in with refrigeration in most cases. It involves use of equipment which not only closely controls temperature, but also regulates humidity and air movement.

Packers generally are familiar with the specific conditions of temperature, humidity and air movement required in the various departments of the packing house and efficient equipment is available. The problem of air conditioning, therefore, is merely one of applying and adapting the equipment to the location in which it will be used.

Use of Unit Coolers

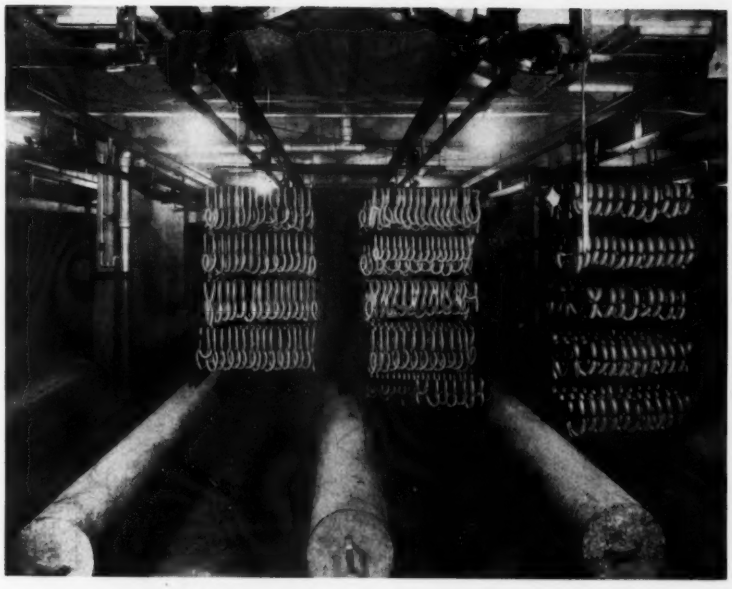
This is not as simple as it appears, however. Technical considerations are involved, and these can be analyzed and provided for only by a trained and experienced air conditioning or refrigerating engineer.

General recognition of this fact has eliminated the unsatisfactory and disappointing results that often followed from casual selection and inexpert installation of air conditioning equipment —particularly unit coolers—when this equipment was first offered by manufacturers for use in meat plants.

Today it is rare to learn of a unit cooler installation that is not functioning satisfactorily. This policy of packers of taking their air conditioning and refrigerating problems to experts for solution, largely adopted during the past year, has probably contributed more toward standardizing refrigerating and air conditioning practices and methods than any other air conditioning development of the year.

Beef Aging and Sausage Drying

Successful application during 1937 of unit air conditioning systems in beef aging coolers and sausage drying rooms (see July 24 and December 11, 1937 issues of THE NATIONAL PROVISIONER) will very probably encourage more packers to produce high quality aged beef and to engage in the manufacture of dry sausage. For both beef aging and sausage drying unit cooler conditioning systems are relatively inexpensive and efficient, and they enable operations to be carried on under ideal conditions regardless of the characteristics of the weather outside the meat processing plant.



FRANKFURTS IN AIR-CONDITIONED SMOKEHOUSE

More packers are air-conditioning their smokehouses. In this installation smoke and hot air inlets are at top. Note absence of grease on floor, and of soot and ashes on walls and equipment. Also evidence of small shrink. Meats smoked in air-conditioned smokehouse are noted for their clean, bright appearance.

Numerous air conditioned smokehouses were installed in meat packing and sausage manufacturing plants last year. While air conditioned smokehouses were not a development of 1937, the increase in their use is significant as indicating packer appreciation of facilities for bringing all factors influencing smoking results under closer control and advantages in producing clean, bright product with little shrink.

Forecast for 1938

It may be expected that increased use of equipment to maintain ideal conditions of temperature, humidity and air movement in chill rooms, coolers and processing and manufacturing departments in the meat packing plant will continue.

One direct result foreseen from the successful application of unit cooler air conditioners to the sausage drying room

DRY SAUSAGE YEAR AROUND

Air-conditioning makes sausage drying a simple matter at all seasons, regardless of outside weather conditions. Unit cooler air-conditioning systems were applied successfully in sausage drying rooms in 1937.

LOCKER PLANT STORAGE ROOM

These plants, which are growing rapidly in number, cut, wrap, freeze and store meat in individual lockers for their customers. Most of them also grind hamburger and pork sausage and render lard, and some are adding slaughtering facilities.

is an increase in the number of plants making these products. The unit cooler not only takes the uncertainties out of sausage drying, but enables production to be carried on at all seasons of the year regardless of outside weather conditions.

The ability of air conditioning equipment to bring all factors influencing one of the most critical operations in meat processing—smoking—under close and accurate control forecasts the use of this equipment for this purpose in an increasing number of plants.

Refrigerated Locker Plants

WHETHER or not refrigerated locker plants may properly be classified as units in the meat industry, they are of considerable interest to packers, more particularly from the standpoint of possible future developments than from present competitive angles.

When these plants first came into prominence there was some speculation among meat packers as to the extent to which processing and manufacturing might eventually be carried on in them. Would the owners of these plants be content merely to provide slaughtering, cutting, freezing and storage service, or would they be tempted to increase revenues by extending their service to processing and manufacturing and eventually develop into full-fledged small packing and sausage manufacturing plants?

Few refrigerated locker plants have been operating longer than 2½ or 3 years. There is, therefore, little accumulated data on their results and none too much information on operating data and experiences. It may be too early, therefore, to attempt to define trends. However, there are some facts available which the packer trying to forecast the future status of locker plants will find of interest.

Development Trends

The Agricultural Extension Division of the University of Minnesota, from a survey of refrigerated locker plants in that state, found no disposition among the owners to sell meats at retail. "Nearly all operators are of the opinion," the report of this survey says, "that it is not within their province to sell meat at retail. Most plants, also, do not offer curing service at present, but there appears to be a trend toward adding that service."

Most locker plants, however, do render lard and make hamburger and pork sausage for their customers, and curing and smoking services are being added. From servicing customers it would be only a step to performing these operations on meat for wholesale or retail sale, for practically all locker plants have a butcher in charge.

On the other hand a survey of cold storage locker plants in Iowa and adjoining states indicated that a large majority of the operators are satisfied with profit results. This does not necessarily indicate, however, that these same operators would be averse to increasing income by expanding activities. As one Iowa packer pointed out: "The fact that locker plants are profitable increases the danger of competition for the meat packer, for when a business makes money it has funds for expansion."

City Dwellers Using Lockers

From 10 to 90 per cent of the lockers in individual locker plants are now rented to city dwellers, the Iowa survey revealed. These city dwellers purchase their meat from farmers for the most part, although in some cases locker plant operators purchase carcasses and wholesale cuts from packers for them.

Locker plant construction was active in 1937, particularly in the Central West. One engineer who has been watching this development closely estimates in excess of 1,500 refrigerated locker plants in operation, and he believes that eventually there will be one of them doing business in every rural trading center.

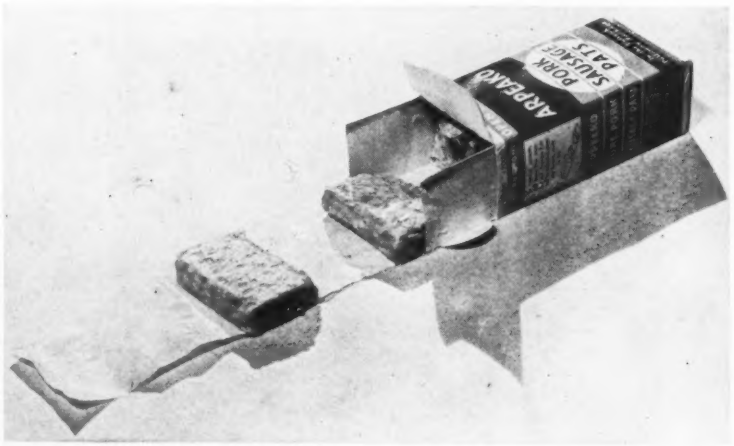
Lockers rent for from 75c to $1.50 per month and from $9.00 to $10.00 per year. Cost of power and water varies from $1.50 to $2.00 per locker per year. In addition, service charges are made for picking up and slaughtering livestock, cutting and wrapping previous to freezing, grinding hamburger and sausage, rendering lard and curing and smoking meats.

COLUMBUS PLANT TO ARMOUR

Directors of the Columbus Packing Co., Columbus, O., this week approved the sale of the business to Armour and Company, Chicago. Details of the transaction were not divulged. It is understood that the Columbus plant will be continued as a division of Armour and Company and will manufacture, process and merchandise as a unit of this national packer. The Columbus Packing Co. plant has been handling about 5,000 hogs, 150 cattle, 450 calves and 150 sheep and manufacturing around 100,000 lbs. of sausage weekly. The firm is capitalized at $1,500,000 and has annual sales of around $12,000,000.

PACKERS ARE MODERNIZING

M. Machlin Packing Co., Fresno, Calif., is drawing plans for a new sausage department, which will include air-conditioned smokehouses. Pureta Sausage Co., Sacramento, Calif., is remodelling and enlarging its plant. Both concerns are installing "Buffalo" sausage equipment provided by Wm. F. Mueller, Pacific Coast representative of John E. Smiths' Sons Co., Buffalo, N. Y.



ONE OF THE NEW PACKAGES OF 1937

A pull on the parchment lining of this pork sausage carton brings out the patties, one by one, ready for the frying pan. (Photo Paterson Parchment Paper Co.)

Wrapping and Packaging

WERE packers and sausage manufacturers not disposed to take advantage of modern packaging developments and efficient display to give their products the greatest eye and sales appeal, they would undoubtedly be forced to keep in step with advanced merchandising practices by the competition of non-meat food items.

One has only to visit the modern retail food store, and see the appealing manner in which practically all foods are now prepared for retail sale and displayed to catch the eye of the housewife and influence her to purchase, to appreciate the merchandising handicap any food product is under that is not attractively wrapped and packaged.

Regardless of criticism directed against packer merchandising methods in general, the meat industry has been alert and progressive in wrapping and packaging matters. It has not only been responsive to packaging developments, but also prompt to recognize and solve the special problems connected with meat packaging. While meat wrapping and packaging practices might profitably be carried further, in the opinion of some merchandisers, and undoubtedly will be, few food products are now presented more attractively in the retail food store than fresh and smoked packaged meats, sausage and meat specialties.

Packaging Developments

Meat wrapping and packaging went forward in 1937, a number of new meat wrappers and packages and packaging practices being developed during the year. Important among these were:

1.—Identification of Sausage in Natural Casings.—Method consists in introducing a strip of paper bearing name and trade mark of the products immediately under the casing at time it is stuffed. Printing stands out clearly and distinctly after the sausage is cooked and smoked.

2.—Smoked Hams in Transparent Cellulose Casings.—A very attractive method of marketing these cuts, and identifying the product until it is in the purchaser's kitchen. This method of packaging hams is reported to have increased sales wherever used.

3.—Veal and Lamb Carcasses in Printed Transparent Cellulose Wrappers.—A method of packaging that adds materially to the good appearance of carcasses, as well as keeping them clean and attractive when displayed in the retail store.

New Packages

4.—Cocktail Frankfurters in Re-use Tumblers.—A package that adds to eye and appetite appeal and is said to have favorably influenced consumer acceptance of the product.

5.—Country Style Sausage in an Earthenware Bowl and a Transparent Cellulose Cover.—A novel and attractive package that appeals to the housewife.

6.—Pork Sausage Patties in a Handy Carton.—Patties are removed from the carton by drawing out a parchment strip in which the patties are wrapped. Patties may then be handled into the skillet without touching them with the hands. This is a container that should prove popular with housewives because of the ease and convenience with which the contents can be removed.

7.—Center Cuts of Smoked Ham in a Printed Transparent Cellulose Wrapper.—Two slices are included in each package, and the packages shipped in a counter display carton.

These are only some of the 1937 packaging developments.

Forecast for 1938

Packers and sausage manufacturers are committed to the policy of offering their products for sale in an attractive and cleanly manner, which necessitates the use of a large variety and style of wrappers, packages and containers.

A packer's wrapping and packaging practices—unless he cares to have his products at a merchandising disadvantage in the retail store—are dictated not only by a desire to give his products the greatest eye and sales appeal, but also by the wrapping and packing progress of his competitors and manufacturers of competiting non-meat food products.

There is no possibility, therefore, that wrapping and packaging progress will lag in the meat industry. Not only may the general use of better designed and more attractive wrappers and packages be expected, but there will also be developed wrappers and containers for many products for which, as yet, no successful container has been devised. One development forecasting this is the successful transparent cellulose wrappings recently devised for lamb and veal carcasses.

Larger hog supplies are predicted for 1938. As many pork cuts—including hams, bacon, butts, shoulders, pork sausage, jowls, etc., are marketed in wrappers, packages or containers—this implies a greater use of all wrapping and packaging materials next year.

NEW DRESS FOR HAMS

Hams in printed cellulose casings. In addition to slicing to better advantage, this method of packaging—a development during 1937—adds considerably to eye and sales appeal.

MEETS A CONSUMER NEED

Boned and fatted center slices of smoked ham in printed transparent cellulose wrappers—a packaging innovation first introduced in 1937. Two slices are inclosed in each wrapper.

Meat Distribution

DEVELOPMENTS in meat distribution methods during the year were important in increasing distribution efficiencies and reducing delivery costs.

Truck routing, special deliveries, small orders, truck maintenance policies and distribution costs continued to receive attention and rather intensive study. From the knowledge gained from these studies and investigations many packers and sausage manufacturers have been encouraged to discontinue unprofitable practices. They have found that the adoption of more businesslike policies have not only reduced losses, but have also considerably increased the overall efficiency of the truck fleet.

The motor truck is the most important means used for distributing packinghouse products and is used universally by packers and sausage manufacturers. Somewhat more than 93,000 trucks are in service in the industry and the number is increasing each year.

Routes Increase in Length

Increase in hard road mileage and improvements in truck design and construction—with a consequent betterment in truck performance and reliability—have not only enabled packers and sausage manufacturers to improve service to customers in their normal trade territory, but have also encouraged them to increase the length of their routes and to reach out for business at increasing distances from the plant. Some packers today operate regular routes 400 to 450 miles long.

The effect of this has been to increase the length of the average route and unit distribution costs and to require the use of more vehicles for a certain tonnage than would be needed were the same quantity of products delivered over shorter routes.

Savings with Semi-Trailers

Fortunately the semi-trailer unit has offered the packer the opportunity to offset the unfavorable effects of longer routes on unit distribution costs and overall fleet efficiency, and he has been quick to avail himself of the opportunity. Compared with truck units, the semi-trailer makes possible a decided reduction in transportation costs through its ability to carry heavier loads with no increase in driver expense, and with a less proportional operating cost per 100 lbs. of product carried.

Packers are also learning that these operating advantages of the semi-trailer unit hold true generally for short as well as long routes. Where loads justify the semi-trailer is rapidly replacing the single unit. It may be expected, therefore, that the number of trailers in meat distribution service will continue to increase.

Operating Costs

There developed during the year what now appears to be a well defined trend away from uniformity of truck sizes and types within a fleet. More and more each vehicle is being carefully selected for the route on which it will operate and the service it will perform.

Once a vehicle has been assigned to a route it is kept on that run under one driver until replaced by another vehicle. This policy results in more accurate operating costs and a reduction in unit delivery expense, it has been found. Also responsibility for economical operation and accidents and damage to the vehicle can be definitely placed.

Truck Refrigeration

Considerable study continues to be given to protection of products in transit. Number of refrigerated trucks in service increased during the year. In this connection it is interesting to note that packers are less inclined to economize in amount of insulation specified for the truck body. Jobs in which 4 in. of insulation were placed in top, sides and ends were reported frequently.

As length of average route is increased it becomes increasingly important that there be employed reliable methods of refrigeration that can be positively controlled. Failure of refrigeration on a short route seldom exposes the meat to much danger of spoilage, even in hot weather. But temperatures too high or too low or failure of refrigeration on a long route may be costly in money and customer good will.

Temperature Control

A more efficient method of using ice for truck refrigeration, with which more uniform temperatures and closer control can be secured, was one of the developments of the year.

Packers who use solid carbon dioxide for refrigerating their trucks have given attention to temperature control methods and means for carrying an extra supply of refrigerant to protect the load against deterioration or spoilage in the event of truck breakdowns or delays.

In the field of mechanical refrigeration for trucks there has been a decided trend toward refrigeration storage units, charged either at the plant or by a compressor installed on the truck, with sufficient excess capacity to maintain desired temperatures for any period the truck may be away from the plant.

Operating Costs

Average length of delivery route increases from year to year in the meat packing industry. Two factors are probably principally responsible for this—extension of paved road mileage and increasing truck dependability and reliability.

One result of longer routes has been an increase in the average delivery cost per unit of product, a cause of concern in many cases inasmuch as longer routes mean greater overlapping of sales territories and consequently keener competition.

As length of route increases, therefore, more thought is given to offset higher delivery costs by greater delivery efficiency, obtained by a more careful selection of equipment and drivers and closer supervision of both, accurate delivery cost records, elimination of costly practices (small orders and special deliveries) and the carrying of heavier pay loads whenever possible by the use of heavier trucks and semi-trailers.

With 93,000 motor trucks in use in the meat industry, normal increase in truck numbers may be expected due to the opening of new routes and increasing the length of old ones, and additions to the truck fleet will be required to handle long-distance deliveries diverted from the railroads by the recently-granted increase in railroad meat freight rates.

ONE WAY TO CUT DELIVERY COSTS

A decided trend toward the greater use of semi-trailers by meat packers was evident in 1937. These units can be used on both long and short routes to reduce distribution costs by packers extending areas they serve.

Watch Classified page for bargains in equipment.

EXPERTS *Review 1937* PROGRESS

Engineering Progress

By BARNEY WINGER

Chief Engineer, John Morrell & Co.

LABOR costs are tending upward in the meat packing industry. And, strangely, as wage rates are raised, there frequently follows a lowering in individual efficiency. Thus labor efficiency is becoming lower and labor costs are increasing beyond what is indicated by increases in the wage rate.

BARNEY WINGER

Efficiency Cuts Labor Costs

One of the jobs of the packinghouse engineer is to attempt to offset labor cost increases by better processing efficiency. To this end he must be on the alert continually for improvements in machinery, equipment and methods which will increase production, lower costs or turn out better products.

The past year was devoid of any startling discoveries, but was not without developments of interest and value in meat processing. At the engineering section meeting of the annual convention of the Institute of American Meat Packers a description was given of the new method of removing hair stubble from hog carcasses with an adhesive mixture.

Hog Carcass Cleaning

I believe this is an important forward step in hog cleaning and that it deserves mention. Our company is taking advantage of it. The use of an adhesive mixture for removing hair is not new. It was tried several years ago in a crude way, but it was only during the last year that it has been improved to the extent that it now seems entirely practical and applicable to almost any rate of slaughter.

This new method will not replace the scalding tub and the dehairing machine. It is a supplement to these and perfects the hog cleaning operation, making it possible to efficiently clean hogs in the hard hair season.

Better Refrigeration

Improvements in refrigeration are important to the meat packer. In this connection we note a tendency to change the method of chilling hogs. Instead of brine sprays over decks for quick 20-hour chilling, packers are adopting unit coolers. In this they are prompted by insistent demands from the B. A. I. for better conditions in the hog coolers rather than improvements in the chilling operation.

Use of unit coolers in hog chill rooms is well established, results in good control and, in the case of a new building, shows a saving in building cost due to less head room requirements. Use of the ice making machine, replacing the old can-freezing method, is coming to the front, both for car icing and for sausage manufacture.

Improvements in smokehouses to secure better control of heat, smoke and air, are being rapidly applied.

Glass Brick for Walls

In new buildings the tendency is to supply diffused sunlight into the various rooms by the use of glass brick for side wall construction.

We have used glass bricks in our latest buildings, and so far they have proved to be a good substitute for brick and plaster walls and conventional windows and steel frames. Costly maintenance is eliminated. Ventilation is obtained from a central source or by the unit system.

Rubber Tired Truck Wheels

The past year has seen extensive use of rubber tired wheels for hand trucks and other vehicles for interdepartment use. Their use results in a decided saving in floor repairs, besides easing the trucker's job.

Use of rubber tired wheels makes the selection of floor surface less important, and we shall probably find that ordinary cement finish will be all that is required.

Adoption by the railroads of longer freight trains and higher speeds is causing us to make improvements in the construction of our refrigerator cars. They are being constructed stronger and are better insulated. In addition, consideration is given to shock absorption as a protection to the lading.

Power as a By-Product

Packers are keeping in step with developments and improvements in steam generation. The trend is to use higher steam pressures and highly-superheated steam.

This makes it desirable to produce electric power as a by-product, using an extraction type turbine with two or more bleeds of different pressures for operating ammonia compressors, general processing and plant heating.

A power plant may be constructed to provide its own standby power, but in most cases—as with us—it is the better plan to tie in with the local power company on a give-and-take basis, coupled with standby service.

Power Company Cooperation

It is only recently that the power companies have been willing to cooperate in this manner. But now even the larger electric power corporations realize that cooperation with the packer is beneficial to both parties. This is because of the very favorable load factor existing in most packing plants, where the heaviest electric demand occurs during the short day period, and a lighter electric load in the evening period when the average city demand is at its peak.

This situation makes it possible for the packer to give power when it is most needed by the power company, and to secure standby services at a profitable figure.

Plant Improvements

By H. M. SHULMAN

Chief Engineer, Hammond Standish Co.

FIRST attention in a program of modernization for the meat packing industry should be given to the power plant. Packers have watched other industries cut basic costs with power developments, but have been comparatively slow to turn these improvements to their own use.

H. M. SHULMAN

Steam and Power

Chief among the levelopments which can be used to good advantage by packers are turbo-generator sets. These can effect remarkable economies in the manufacture of packinghouse power as a by-product of powerhouse steam requirements and processing steam demand.

After suitable heat balance studies are made in individual plants, any number of combinations are available, capable of effecting startling reductions in the cost of producing steam, electricity and refrigeration. There are instances on record where, after a moderate power modernization program has been adopted, electricity has been produced at the cost of only a very little additional fuel, and in some cases on a self-liquidating basis.

Through power factor improvement capacitor installations are becoming common practice. It is possible to effect savings such that the investment may be liquidated within a two-year period or less, depending upon the plant distribution system.

Refrigeration Progress

Supplementing power house developments are certain advances in refrigeration methods. In 1925 we dared to predict that an 18-hour chill for hogs would soon be an accomplished fact. Today, through the utilization of forced air movement independent of refrigeration, and brine spray operating independently or in combination, a 14-hour chill is common practice.

Further, central refrigerating systems are being supplemented by indi-

vidual temperature and humidity control systems in various departments, resulting in improved appearance of product, saving in shrinkage, mold control and reduced operating costs.

Where increased refrigeration loads have rendered present coils inadequate, unit coolers have been found helpful in furnishing additional refrigeration tonnage, aiding at the same time in supplying mechanical air circulation.

Other Developments

Dry Rendering.—This has been given serious consideration for inedible departments where prime steam lard must of necessity be continued on the edible side. But where this problem does not exist, we believe that new installations are adopting dry rendering throughout the tankhouse. Where wet rendering continues to be used, all-welded construction pressure vessels are replacing riveted type vessels, thus eliminating a large maintenance item in rivet replacement.

Hog Kill. — Extensive developments have been made with depilating equipment on the hog killing floor which would indicate a reduction in the unit cost. This is particularly adaptable where existing dehairing machines are still giving fairly good results.

Reclamation of Crank Case Oil.—This development for cutting cost of operating automotive equipment, first started in a practical way some 10 years ago, has now grown into an individual filtering unit that has permitted trucks to operate for an entire season without oil change.

Rubber-Tired Wheel Equipment.—Rubber tires on plant trucks are finding widespread practical application, resulting in savings in man power and a considerable saving on floor maintenance. These tires are listed as standard equipment by the leading supply houses.

Equipment and Construction

Stainless Steel.—Rapid strides have been made in the use of this material in packinghouse equipment. No doubt when this commodity is more reasonably priced it will be universally adopted in the industry, and will reduce large maintenance and replacement costs.

Floor Construction.—Brick and half brick, properly drained and properly laid, is proving a good investment in many manufacturing departments and in combination with rubber-tired equipment can reduce maintenance costs greatly.

Trolleys With Oilless Bearings.—Experiments to provide hog and beef trolleys with oilless bearings promise to offer another maintenance economy within the reach of most packers.

Push Button Control.—Elimination of line shafting and substituting unit push-button control drives tend to reduce operating costs.

Considerable study has also been given to the problem of beef aging, with helpful results in improving product.

These engineering developments are but a few of those which offer themselves to progressive packers desirous of widening their market through an improved product and a reduced cost per unit of production.

Cutting Plant Costs

By H. K. GILLMAN
Chief Engineer, Albany Packing Co.

MOST packers and meat plant engineers will agree that the Tobin hog depilating method was the outstanding development in meat plant processing equipment in the last year.

H. K. GILLMAN

This method of removing hair stubble from hogs and cleaning carcasses after they come out of the dehairing machine (introduced by the Allbright-Nell Co.) is familiar to most packers. I will not describe it here. However, some information and data, not heretofore published, has been secured from observation of this method of cleaning hogs in the Tobin Packing Co. plant, which will be of interest to packers seeking information on the results of this method.

Hog Depilating Method

Manufacturing costs are reduced materially under this system. Hogs can be killed for 20c per head. This figure is for direct labor for the complete hog dressing operation — including head bench, sterilizing heads, cooler, pulling and fatting viscera, driving hogs to the killing floor and clean-up.

Maintenance costs on the hog dehairing machine can be reduced 50 per cent. Quality of product from hogs cleaned by this depilating method is superior. It is more desirable, therefore, both as fresh and processed meats, and should be preferred by consumers.

Hogs which pass through the depilating method chill faster than hogs which do not receive this treatment. This apparently is due to the cleaning of the pores, making possible a more rapid transfer of heat through the skin of the animal.

Cleaning and Oiling Trolleys

A new method of cleaning and oiling trolleys worked out in the plant of the Tobin Packing Co. should be of considerable interest to packers whose present methods are unsatisfactory or whose trolley cleaning costs are high. This method has been in use in the Tobin plant for about two years, where it has given outstanding results at a very low cost.

The cleaning and oiling equipment consists of two containers and two sections of free, counter-balanced overhead rail. One container holds caustic soda and water, and the other wax paraffine, to which has been added 12 per cent of No. 50 S.A.E. lubricating oil. The caustic soda and water solution is maintained at a temperature of 200 to 205 degs. F. and the wax paraffine solution at a temperature of 180 degs.

Trolleys come direct from cutting room to overhead rail above the containers. Here they are bunched about 25 to a cluster, pushed onto a free section of rail and lowered into the caustic soda solution. They are then immediately pushed to the other free section of rail and lowered into the wax paraffine and at once raised again to the rail. This is all there is to this cleaning method.

Costs 13c per 100 Trolleys

A wax-like appearance is given the trolleys, only enough of the paraffine wax adhering to prevent rusting. The wax coating will not rub off on the hands and will not stain hands or product. Cleaning cost is approximately 10c per 100 trolleys for labor and 3c per 100 for materials. Installation cost in a medium-size plant should not exceed $300.

Paraffine wax alone will not satisfactorily protect trolleys from rusting. Paraffine wax, on the other hand, affords good protection. The purpose of adding the oil to the wax is to lubricate for the trolley bearings. The paraffine wax and oil are heated with a closed steam coil and the caustic solution with open steam. Caustic solution is changed daily and the paraffine wax about once each 30 days.

These are a few of the improvements to cut cost and improve product and operations which have been worked out in 1937. We, like many other packers, are constantly on the lookout for anything which will widen our narrow margins. The coming year should bring forth further development in these directions.

ALABAMA MEAT PACKING

Alabama meat packing plants are increasing in importance. They annually produce approximately 19,000,000 lbs. of fresh beef and veal, about 6,000,000 lbs. of fresh and cured pork and about 100,000 lbs. of lamb. Value of the product of the meat packing industry of Alabama increased from approximately $2,500,000 in 1933 to more than $5,000,000 in the latest year report. Of this amount more than three-fourths (nearly $4,000,000) was paid for livestock, supplies and materials, including fuel and power and about $450,000 for payrolls.

There are eleven meat packing establishments in Alabama, according to recent figures. In January, 1937, Alabama farmers owned more than 500,000 beef cattle, more than 1,000,000 hogs, and about 47,000 sheep and lambs.

Plant Construction and Equipment

By H. P. HENSCHIEN
Architect and Engineer

THE year 1937 has been one of marked increase in packing plant construction. Many new plants were built in localities where livestock production is sufficient to support such enterprises, and much construction work was done in existing plants where larger or improved facilities were needed.

H. P. HENSCHIEN

During the first part of the year cost of building materials and labor were favorable. Later there was a sharp increase in the price of almost everything which enters into the cost of buildings and equipment. This retarded some work which otherwise would have been started. The present stagnation will very likely continue until there are sufficient economic reasons for new building activity.

Light and Sanitation

A survey of recent plant construction indicates the study which has been given to light and sanitation, and to the use of modern building materials. It is evident that the present regulations of the U. S. Bureau of Animal Industry are helping to build a better industry, with more efficient plants and better working conditions.

Plant units are grouped and arranged to provide ample daylight in all workrooms which are not refrigerated. Walls are mainly of glass construction, with glass brick given a preference over windows. Skylights are of generous proportions in saw-tooth style, and faced towards the North to avoid any glare from direct sunlight. Openings in outside walls are limited to the requirements for access and mechanical ventilation.

Construction Developments

When glass brick replaces windows and fly screens it is a long step toward reduced maintenance cost and better sanitation, less dirt, dust and flies. Where mechanical ventilation takes the place of open windows, working conditions are much improved by proper air circulation and control of humidity—all-important factors where labor is employed.

Building tile and brick with a glazed finish for the interior of packing plants have been universally adopted. In fact, many new buildings use such materials throughout. They are sold at reasonable prices, and are therefore a good investment from a sanitary and maintenance standpoint, besides giving an attractive appearance to the premises.

The many failures of reinforced concrete in packing plants have given concern to all. Concrete is used for practically all structural purposes, and its failure to withstand the every-day conditions in many operating departments, coolers and freezers is only too evident.

Concrete Difficulties

In many plants it has been necessary to replace all or part of entire floors, columns and beams. The expense and inconvenience of such repair work has prompted a thorough investigation of the underlying reasons for this condition. The Portland Cement Association and other research bureaus are helping to solve this common problem.

It is evident that concrete must have suitable waterproof protection, since it is not in itself waterproof; also that protection is necessary in coolers and freezers where the concrete is continuously exposed to moisture and frost. In recent building work there is much evidence of improved construction methods which protect the reinforcing steel from rusting and the concrete from disintegrating.

The old and ever-present problem of protecting packinghouse floors against damage from heavy trucking is being solved in an economical way by the use of rubber-tired truck wheels. In old plants the money invested in such equipment is returned from saving in maintenance expense and repairs, and in new plants by less investment in brick paved floors or other costly floor protection.

New Refrigeration Ideas

In the field of packinghouse refrigeration there is much which is practical and useful for new as well as old plants. Unit coolers and air conditioners are replacing pipe coils and drip pans in cold storage rooms, and taking the place of brine spray decks in beef and hog chill rooms. With this type of equipment it is possible to obtain automatic control of cooler temperatures and humidity over a wide range of operating conditions.

The welding of ammonia mains and pipe coils in freezers is another forward step in refrigeration practice.

Ice for refrigerator cars and trucks can be made by a continuous process of freezing water into snow and compressing this into small ice cubes or briquettes. This method is rapidly replacing the ice-making tank, storage rooms and ice crusher. An accurate cost comparison between the two will be favorable to the new process of ice making, and will also show many economies in the cost of icing cars and trucks.

There are many improvements in the design of refrigerating machines and ammonia condensers which will be of interest to purchasers of new equipment.

Labor Saving Equipment

The blue ribbon for improved methods in packinghouse operations is accredited to the depilating of hogs by dipping the carcass in a tank of hot rosin. Equipment needed for this highly efficient method of hair removal is a valuable addition to any hog killing floor. It will speed up the rate of slaughter per hour, reduce the labor cost of cleaning and improve the appearance of the finished carcass.

All kinds of labor saving equipment are in evidence throughout modernized plants. Conveyors for transfer of product, conveyor type of tables, vats and washers, rail conveyors and spiral chutes are not new, but there are many more uses for them today.

Stainless steel is extensively used for truck bodies, table tops, vats, conveyors, meat hooks and numerous other items. The first cost of such equipment is considerably more, but the upkeep, cleaning and renewal cost is certainly less.

The Sewage Problem

The treatment and disposal of packinghouse sewage and waste must be considered by plants which are now polluting streams or overloading the local sanitary facilities. Many plants have already completed such installations, but there is much work to be done in the near future.

The packing industry, in its efforts to attain perfection, may still be a step behind—but 1938 will surprise us all!

Operating Progress

By CARL F. SCHLOEMANN
Architect and Engineer

DEVELOPMENTS in the meat packing industry during 1937 were numerous, and not only important in improving processing efficiency and reducing costs but also interesting in forecasting future trends. It would be impossible even to touch on all of these developments in a brief space, therefore we will deal here only with some of the more outstanding ones.

C. F. SCHLOEMANN

Changed Curing Methods

There has been a continued trend toward quick curing of meats. Modern curing methods now permit the finishing of meats in from one-fourth to one-half the time formerly required.

This has a marked influence on design and operation of the plant. In former years the slogan was: "A packing plant cannot have too much curing space." All this is now changed. Less money is tied up in the construction of vast curing cellars and in the meat products undergoing the process of curing.

Hog Dehairing

The second important development during 1937 is the new hog depilating

(Continued on page 58.)

MEAT *in the* MENU

Consumers Should Be Told Meat Prices Are Down

MEAT prices are down! This fact has been blazoned in newspaper article after newspaper article issued by the Institute of American Meat Packers and published throughout the country—not once only, but time after time. Everybody knows meat prices have come down.

As another step in its attempt to bring about an increased featuring of meat the Institute wrote to several hundred restaurant proprietors throughout the United States, managers of principal hotels in a number of the large American cities, and to executives of leading railroad companies which maintain dining car service, pointing out that meat prices have declined sharply during the last few weeks and are now at levels which once again allow meat to be featured as a popular economical food.

Beef and Pork Prices Drop

Declines of from 8 to 35 per cent in beef prices—varying with the grade and weight—were registered in the three-months period from mid-September, when prices were at or near a peak, until the end of the year. Prime steer loins had declined 18 per cent. and No. 1 steer loins about 28 per cent.; prime steer short loins had declined about 16 per cent. and No. 1 steer loins 22 per cent.; prime steer ribs 15 per cent., and No. 1 steer ribs 35 per cent.

Fresh pork prices are 29 to 49 per cent. lower than they were at the high point in September. Smoked pork cuts likewise are lower by from 20 to 32 per cent. Veal prices are down 27 per cent. and lamb 13 per cent.

Trade Has Story to Tell

In view of these declines, the Institute feels that there is a very favorable story to tell about the meat price situation to a group which can help materially in reminding consumers that meat is a delicious and nutritious food, and can now be had at prices which are within reach of virtually every man's pocketbook.

It was pointed out to the hotel, restaurant and dining car operators that—because of these declines in meat prices and reports of the U. S. Department of Agriculture indicating a probable greater supply of animals of high quality in 1938, as a result of plentiful supplies of livestock feeds—it is possible to consider an increased featuring of meats on menus. This may be found particularly true of the less-demanded cuts of meat, many of which are available at bargain prices.

"While our suggestion is not a disinterested one," the Institute says, "it is a fact that the livestock and meat industry is an important part of all industry. It has been estimated that about two-thirds of all farm land is used to raise livestock or to grow feed for livestock. This industry markets a majority of the output.

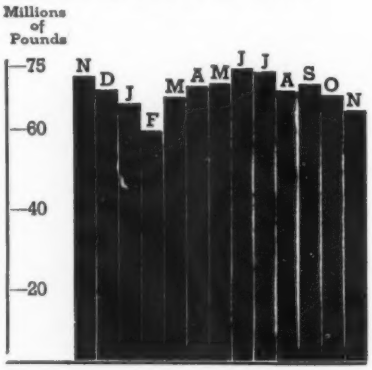
"In view of the price declines, and in view of prospective greater supplies of the better grades of meat, and in view of the important bearing that a ready market at fair prices for live stock has on general business welfare, we sincerely hope that hotels and restaurants may find it possible to feature meat more prominently on the menus they place before their patrons."

SAUSAGE PRODUCTION

Inspected sausage production of 800,368,813 lbs. during the year ended October 31 was the second largest in the past 10 years, being exceeded only in 1936, when output totaled 827,929,000 lbs. Production of meat loaves and loaf products under federal inspection amounted to 104,731,229 lbs. in the year ended October 31, 1937.

INSPECTED SAUSAGE OUTPUT

(Monthly—Nov., 1936 to Nov., 1937)



Monthly trend of sausage production in 1937 followed about a normal course, reaching its low point in February with 56,700,566 lbs. and a high level during the summer months. In October, however, when production is normally at its highest point, sausage manufacturing activity was below the summertime level, accentuating a declining trend which started in August, due largely to shortage in raw material for manufacturing sausage.

1937 MEAT CONSUMPTION

Average per capita consumption of meat in 1937 is estimated at 119 lbs. Of this 50½ lbs. was beef, 8½ lbs. veal, 7 lbs. lamb and 53 lbs. pork.

Meat production in the United States in 1937 is estimated by the Institute of American Meat Packers at 14,750,000,000 lbs. Shortage in feed supplies and in hogs as a result of two record drought years accounted for the lowered output of meat.

"It is believed, however, that the low point of production has been passed," says the Institute. "Government figures indicate that production of hogs, supplies of which have been below normal for the last three years, is expanding. In the case of cattle, a greater supply of animals of high quality is expected as a result of the plentiful supply of feeds available."

Meat consumption in 1938 is expected to show an increase in line with the expected increase in the supply of meat animals.

EDUCATING THE MEAT DEALER

Improvement in meat retailing through intensive education of the retailer in pricing and merchandising all meats—so that no one class of meat would be penalized for the benefit of another, and so that each will bear its share of overhead and selling—was advocated by John A. Kotal, secretary of the National Association of Retail Meat Dealers, in a New Year statement. Mr. Kotal deplored the common practice of using various meat items as "leaders," priced at cost and sometimes below cost.

This is done at the ultimate expense of the livestock producer and is a practice to which he will object sooner or later. "Livestock producers are beginning to take cognizance of merchandising practices," Mr. Kotal said, "and to measure the extent to which these affect the orderly marketing of their products."

Deceptive practices in advertising, substitution of grades and chiseling of prices can be greatly reduced and ultimately eliminated through education, he said. Cooperation of the retail industry with the Federal Board for Vocational Education, it was hoped, would make possible the training of meat retailers in all the principal cities, with the aid of the local retailers' association, and ultimately throughout the nation.

Mr. Kotal felt that the working out of this problem was a part of the program for the New Year, and one, the solution of which would enhance relations between the various branches of the meat industry.

CANADIAN EXPORTS TO U. S.

	Nov., 1937.	11 mos., 1937.	11 mos., 1936.
Cattle, No.	8,113	206,891	186,936
Calves, No.	2,752	96,363	50,255
Hogs, No.	940	75,673	55,710
Sheep, No.	628	1,988	2,277
Beef, lbs.	310,900	2,733,800	1,756,400
Bacon, lbs.	125,500	2,228,900	1,916,800
Pork, lbs.	502,300	16,940,900	9,894,900
Mutton & lamb, lbs.	1,100	17,300	6,500
Canned meat, lbs.	47	3,211	3,566
Lard, lbs.	.....	700	1,100
Lard compound, lbs.	400	700	478,500

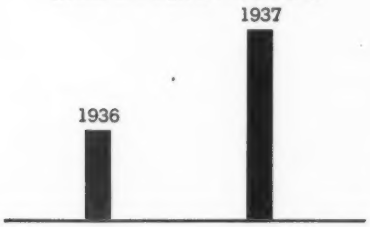
PORK IMPORTS *for First Time* EXCEED EXPORTS

PORK imported into the United States during 1937 exceeded exports for the first time in the history of the country.

Although the total import was not large in relation to the total quantity of pork consumed, the bulk of pork meats imported consisted of such products as cooked hams and picnics in tins, frozen pork loins or loins in tins and to a less extent smoked bacon and ham. The quantity of canned ham alone which was imported was more than double that imported in 1936.

HAM IMPORTS DOUBLE

(Canned ham imports, 1936 and 1937)



Approximately 38,000,000 lbs. of canned ham was imported into the United States during 1937 compared with 17,500,000 lbs. in 1936. Imports during the year just ended were about equivalent to the production of hams from 40 per cent of the hogs marketed at Chicago during the year, equalling the ham production of approximately 1,500,000 hogs, as those imported were cooked and ready to serve.

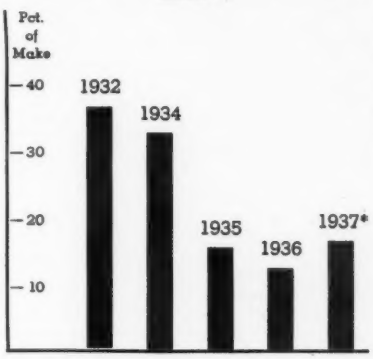
Livestock and Canned Meats

In addition to pork meats imported, approximately 90,000 live hogs for slaughter were imported, compared with around 70,000 head a year ago. Cattle and calves imported for slaughter totaled 500,000 head, compared with nearly 400,000 head in 1936. Bulk of these cattle came from Canada and Mexico, Canada furnishing the most of those weighing 700 lbs. or over, and the import from Mexico falling in the group weighing under 700 lbs.

Principal import of beef is in the form of canned beef from South America. Quantity of beef imported this year was slightly less than that of a year ago, totaling nearly 100,000,000 lbs. About 3,000,000 lbs. of fresh beef was imported from Canada, which also furnished approximately 17,500,000 lbs. of fresh pork.

LARD EXPORTS IMPROVE

(Exports as percentage of federally-inspected production)



*First 10 months of 1937.

Pork exports during 1937 at approximately 56,000,000 lbs. were the smallest since 1890, prior to which there appears no exact record. They were 8,000,000 lbs. under the low export total of 1936.

Lard Exports

Lard exports, on the other hand, showed some increase, totaling 130,000,000 lbs. for the year, compared with 112,000,000 lbs. in 1936. High price of lard during much of the year was an influence in reduced foreign shipments, although countries like Germany and Great Britain greatly reduced the quantities taken from the United States. Rise of Cuba as a customer for U. S. lard was a material factor in increasing the export volume.

Denmark and the Danubian countries of Continental Europe have risen not only as sharp competitors for the export market for pork meats in such countries as Germany and the United Kingdom, but have also invaded the market for lard, as has Brazil and to a less extent the Argentine Republic.

The United States long since lost its export market for beef, 1937 export of beef totaling only 12,000,000 lbs. which was more than 1½ million lbs. under the 1936 export.

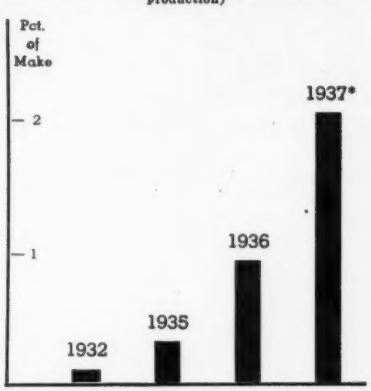
CANADIAN BACON IN LONDON

While the Canadian hog does not obtain entry to all the best homes at present, he is slowly improving his rating in the London market—the hog's social register—and in time may expect to be received in the most exclusive bacon circles. Explaining today why a Canadian porker, rated 100 per cent quality at home should be given a 90 per cent rating in London, N. J. McLean, general manager, Canada Packers Limited, said it was mainly a question of building up a taste in Britain for the Canadian product.

Mr. McLean said the market in Britain for Danish bacon—from the bon ton of hogdom—had been laboriously fostered over a long period of years. Breeds, feeding, slaughtering and marketing methods had been raised to a high standard. Mr. McLean believed select Canadian bacon hogs were the equal of any in the world, but in the average the Canadian product fell slightly below that of Denmark. But progress was being achieved and in time he felt Canadian bacon would command a price nearer the top in London.

PORK IMPORTS AT NEW HIGH

(Imports as percentage of federally-inspected production)



*First 10 months of 1937.

FARM BILL IN CONFERENCE

McNary-Boileau amendment to the farm bill, which would prevent farmers using land diverted from soil-depleting crops for growing livestock feed or as pasture, may be modified in conference, according to Congressional leaders who are working on the bill. Senator James Pope, co-author of the Senate measure, has led the fight on the dairy amendment, contending it would make enforcement of the farm plan virtually impossible. The House amendment is attached to a section providing for soil conservation payments, while the Senate amendment is in connection with a section providing for benefits based on parity.

WATCH YOUR GREASE TANK

Does your grease tank get items from your offal room that should go to the lard tank? Give your foreman a copy of "PORK PACKING," The National Provisioner's pork plant book.

STAHL-MEYER *Sales Larger*

Plant Improved and Financial Position Sound

SALES of Stahl-Meyer, Inc. for the fiscal year ended October 30, 1937 were 6 per cent larger than those of a year earlier, totaling $6,694,248.75. Ratio of current assets of the company to current liabilities was 6 to 1 and the company's cash position was regarded as fully adequate for present requirements. Current assets totaled $824,218.73 and current liabilities $138,589.07. Of current assets $112,154.61 was in cash, $254,834.44 accounts receivable and $457,229.68 inventories. Surplus on hand Oct. 30, 1937 was $343,310.87.

GEO. A. SCHMIDT

In presenting his report to stockholders under date of December 23, 1937, President George A. Schmidt said that changes and additions had been made in the power plant which will make operations more efficient. Amortization of the mortgage account and retirement of preferred stock was accomplished as heretofore, wage levels were advanced, and the company maintained its relative position in the industry.

"Reduced supplies of raw materials and unsettled conditions for the latter half of the year coupled with severe declines in livestock prices which caused heavy inventory losses, are to some extent responsible for the operating results," Mr. Schmidt said. A net loss of $123,855.40 was shown.

PROFIT AND LOSS ACCOUNT

Net sales of meat products		$6,694,248.75
Cost of sales, selling and general expenses		6,723,526.34
Operating loss before depreciation		$ 29,277.59
Provision for depreciation of plant and equipment	$88,863.84	
Interest charges	11,565.63	
Provision for state taxes	2,427.68	102,857.15
		$ 132,134.74
Deduct miscellaneous income (net)		8,279.34
Net loss for year		$ 123,855.40

Directors of the company are Otto Stahl, chairman of the board; Otto Weber, Lester S. Abberley, C. William Wohlers, Louis Meyer, Waldemar J. Neumann, H. Walter Blumenthal and Otto R. Stahl. Officers are George A. Schmidt, president; Louis Meyer, vice-president and treasurer; Otto P. Schult and Otto Weber, vice-presidents; Waldemar J. Neumann, secretary.

FINANCIAL NOTES

Directors of National Tea Co. this week omitted the quarterly dividend of 13¾ cents a share on the 5½ per cent $10 par preferred stock. The company omitted payment of a common dividend last June.

President W. G. Reynolds of the Reynolds Packing Co., Union City, Tenn., reports that gross sales of $1,250,000 during 1937 were 20 per cent greater than in 1936. The firm's sales in 1937 exceeded $1,000,000 for the first time in its history.

CHAIN STORE SALES

Sales of Safeway Stores, Inc., for the 52 weeks ended December 25 totaled $380,320,284, an increase of 11.8 per cent over volume of $340,024,344 a year earlier. Stores in operation on December 25 totaled 3,286 compared with 3,364 on December 25, 1936. Volume in the four weeks ended December 25 amounted to $29,157,818, a gain of 6.3 per cent over sales in the corresponding period last year.

PACKER AND FOOD STOCKS

Price ranges of listed stocks, January 5, 1938, or nearest previous date compared with a week ago.

	Sales. Week ended Jan. 5.	High. Jan. 5.	Low. Jan. 5.	Close. Jan. 5.	Close. Dec. 28.
Amal. Leather	1,900	2⅛	2⅛	2⅛	2
Do. Pfd.	.....	.....	.....	.....	20
Amer. H. & L.	1,400	3¾	3¾	3¾	3¼
Do. Pfd.	.....	.....	.....	.....	21½
Amer. Stores	400	8⅝	8⅝	8⅝	8
Armour Ill.	23,710	6⅛	5⅞	6	5⅛
Do. Pr. Pfd.	900	62	60	62	59⅞
Do. Pfd.	.....	.....	.....	.....	97
Do. Del. Pfd.	700	96	95½	96	99
Beechnut Pack.	100	97	97	97	96
Bohack, H. C.	25	2½	2½	2½	3
Do. Pfd.	.....	.....	.....	.....	16
Chick. Co. Oil.	1,200	12½	12⅜	12½	12½
Childs Co.	1,800	4⅛	4⅛	4⅛	3⅞
Cudahy Pack.	900	17¼	16½	17¼	12⅜
First Nat. Strs.	1,900	30	29⅜	29⅞	27½
Gen. Foods	3,300	30⅞	30½	30⅝	30
Gobel Co.	1,100	2⅜	2⅜	2⅜	2⅛
Gr. A&P 1st Pfd.	....	.....	.....	.....	120⅛
Do. New	325	48	47¾	48	45¼
Hormel, G. A.	.....	.....	.....	.....	16
Hygrade Food	400	2	1⅞	2	1⅞
Kroger G. & B.	1,800	15½	15½	15½	14⅝
Libby McNeill.	2,300	8	7⅞	7⅞	7⅛
Mickelberry Co.	650	2⅞	2⅝	2⅝	2⅞
M. & H. Pfd.	20	2⅜	2⅜	2⅜	3
Morrell & Co.	100	21½	21½	21½	21¼
Nat. Tea	1,600	3⅜	3½	3⅝	3⅛
Proc. & Gamb.	2,300	47½	47	47½	45⅛
Do. Pfd.	270	118	118	118	116⅝
Do. 7% Pfd.	400	124	124	124	123½
Rath Pack.	400	17¼	16½	16½	16⅝
Safeway Strs.	3,100	21	20½	20½	18
Do. 5% Pfd.	160	74	73	73	72
Do. 6% Pfd.	20	88	88	88	88
Do. 7% Pfd.	110	100	100	100	100
Stahl Meyer	.....	.....	.....	.....	1½
Swift & Co.	6,250	18	17⅝	18	16⅛
Do. Intl.	1,450	24½	24	24½	22½
Trunz Pork	.....	.....	.....	.....	7¼
U. S. Leather	700	6	6	6	5⅛
Do. A	1,400	9	8¾	8¾	7⅞
Do. Pr. Pfd.	.....	.....	.....	.....	65
Wesson Oil	1,400	29½	28½	29½	26½
Do. Pfd.	100	74	74	74	5¼
Wilson & Co.	8,300	5½	5¼	5⅛	54¾
Do. Pfd.	100	49¾	49¾	49¾	74⅛

LABOR *Relations*

Packer Wage-Hour Rates Now Above Suggested Standards

MORE dollars and cents jingled in the pockets of packer employes during 1937 as a result of a large wage increase early in the year, which followed another raise in pay late in 1936. Hourly employes in many meat packing plants were given vacations with pay under programs established in 1937.

Average hourly earnings in the slaughtering and meat packing industry amounted to 69 cents during October, 1937, compared with 56 cents in October, 1936. Average weekly earnings during October this year were $28.00, compared with $24.25 in the corresponding 1936 month. Packer employe wages in 1937, therefore, were considerably above any standards suggested in wage-hour legislation during the year, and average of 41 weekly hours in October was fractionally above one of the suggested "maximums."

Stability of packer relations with their employes was somewhat upset during 1937, but in general the industry suffered little from labor troubles during the past year. There were a number of strikes and walkouts, but these were of a local character, and usually settled within a relatively short time.

Labor Adjustments

Decision of the U. S. Supreme Court upholding the National Labor Relations act as constitutional had considerable effect on employer-employe relations in the meat packing industry. It forced abandonment of employe representation plans under which some meat packing companies had successfully negotiated hours, wages and working conditions with their employes for many years.

As a result, employes in a number of meat packing plants formed their own independent unions for collective bargaining with their employers, and in other cases joined unions affiliated with the American Federation of Labor or the Committee for Industrial Organization. In some cases each of the rival unions has claimed to represent employes as the collective bargaining agency and the question has been settled by an election conducted by the National Labor Relations Board.

Strikes in all industries reached a new high in 1937, totaling 4,017 during the first 10 months of the year. About 56 per cent of these strikes arose from efforts of employes to organize for collective bargaining. The National Labor Relations Board, which administers the national labor relations act, played a prominent part in many of the year's labor disputes. The board pointed out recently that its orders have been upheld by the courts in 18 of 20 cases.

MODEL SALES POLICY

Sales success can be built on a policy of equal and fair treatment for all customers, according to the 15-year experience of a West Coast provision company. A policy designed to help independent merchants and protect them against unfair competition has been used for a decade and a half by Tiedemann & Harris, Inc., San Francisco, in selling its line of smoked, cured and canned meats and sausage. The firm believes in:

One price to all, regardless of quantity;

Price protection to the extent that products cannot be advertised at prices to yield less than 20 per cent on gross sales;

No sales to chains or to price cutters who use price to undermine a competitor;

Association of their brands and quality with independent merchants.

Terms are printed on all price lists and any orders received not in accordance with such terms are rejected.

The firm considers that its policy has been successful and that it has been helpful, not only to itself, but also to the retail meat dealers it serves.

DREHER ADDS MEAT LINE

Away down south in Dixie—where country-style pork sausage, grits and gravy is the national breakfast dish—the Dreher Sausage Co., Columbia, S. C., at the close of what J. C. Dreher, jr., called the "biggest sales year and the best Christmas business in our history," distributed a large surplus of profits as a Christmas gift to the entire personnel. All employees who have been with the company one year or more received a full week's salary as a bonus; those of lesser seniority shared proportionately.

Manufacturers of quality meat products for 15 years, the Dreher Sausage Co. will put on the market in January, 1938, in addition to its pure pork sausage and luncheon loaves, a complete new line of sugar-cured smoked hams, shoulders and bacon, to be marketed under the "Dixie Brand" and to be distributed throughout South Carolina.

The Bennett Advertising Agency, Columbia, affiliate of Increased Sales, Inc., of Baltimore, has been retained as advertising counsel for the coming year. A comprehensive campaign is planned, covering newspapers, billboards, direct mail, point-of-sale displays and radio—including a unique demonstration and entertainment program to be conducted in towns throughout the state, broadcasting by remote control over WIS to the entire area.

To take care of increased production and anticipated sales volume the Dreher Co. is installing new equipment and putting on a fleet of stream-lined refrigerated trucks, said to be the latest equipment of its kind in South Carolina.

NO PRICE SHADING HERE

Quality merchandise, coupled with a fair sales policy, has been used by John Tiedemann (left), president, and Dan E. Harris (right), secretary-treasurer, in guiding Tiedemann & Harris, San Francisco, to sales success.

PACKAGING PANORAMA

Packer readers of THE NATIONAL PROVISIONER who are following merchandising and packaging developments have found much of interest and value in the beautiful color illustrations of metal containers—pails, cans, boxes, etc.—manufactured by the Continental Can Co., which have appeared regularly during the past year in its advertising pages.

For the third successive year the company is offering to packers a handsome presentation of these direct color advertisements in "Successful Packages," volume 3. Printed on heavy paper, with colorful cardboard covers and plastic binding, the book should prove a valuable addition to every packer's and meat merchandiser's library.

PRICE MAINTENANCE LAW

Resale price maintenance contracts, where sanctioned by state laws, no longer interfere with federal anti-trust laws as a result of the signing of the Millard-Tydings price maintenance bill by President Franklin D. Roosevelt. Under this bill manufacturers can enter into contracts with dealers who agree not to sell their branded and trademarked products (such as canned meat, soap, etc.) below a minimum price. Prices in such contracts must also be observed as minimums by non-contracting dealers who sell the same products.

The Millard-Tydings law partly nullifies provisions of the Sherman anti-trust act which forbid price-fixing and minimum price agreements. The new law validates such agreements in states which have passed laws authorizing them. In signing the bill President Roosevelt expressed grave doubts as to its desirability, pointing out that it may result in higher prices for consumers.

ADJUSTING COMPLAINTS

The most direct way is usually the simplest way—and in the long run the most satisfactory—to adjust differences arising between customer and salesman. Procrastination and delay only serve to complicate the situation and increase tension. A complaint unadjusted is always a handicap for the salesman. It pays, therefore, to settle it as quickly as possible.

Distinctive Wrapper Helps Ham Get Attention!

Protection first, then sales appeal. This ham gets both! It is wrapped in Patapar Vegetable Parchment, the sheet that not only is *grease-proof* but *insoluble* as well. Its extraordinary strength *when wet* makes it the perfect sheet to use for foods that contain moisture. Furthermore, Patapar can be beautifully printed in fast color inks. The striking effects that can be obtained help attract attention.

When writing for samples of Patapar kindly mention the size and approximate quantities you are interested in, and whether plain or printed wrappers.

Paterson Parchment Paper Company
Bristol, Pennsylvania

West Coast Plant: 340 Bryant Street, San Francisco, California
Branch Offices: 111 West Washington Street, Chicago, Ill. • 120 Broadway, New York, N.Y.

Patapar Vegetable Parchment

INSOLUBLE • GREASE-PROOF • ODORLESS

PRACTICAL POINTS *for the trade*

BRAUNSCHWEIGER METTWURST

One type of mettwurst is especially suitable for spreading on bread and is sometimes called smearwurst. An Eastern sausage manufacturer wants to know how it is made. He writes:

Editor THE NATIONAL PROVISIONER:

Can you tell us how to make braunschweiger mettwurst, or, as it is sometimes known, smearwurst? We understand it is a good sandwich spread.

This is a German sausage and is a popular spread for bread. It should not be confused with liver smearwurst or liver spread. The best braunschweiger mettwurst is an all-pork product. Since it is eaten without further cooking, the pork used in it must be refrigerated at 5 degs. F. or otherwise handled in accordance with B. A. I. regulations.

The following meat ingredients may be used for braunschweiger mettwurst:

45 lbs. fresh lean pork trimmings
55 lbs. lean regular pork trimmings

A German formula calls for:

33 lbs. extra lean pork trimmings
33 lbs. belly trimmings
34 lbs. fat pork trimmings

Grind pork trimmings through ⅜-in. plate and then with seasoning and curing ingredients through ⅛- or 1/16-in. plate, according to consistency desired. Following seasoning and curing ingredients are used:

2½ lbs. salt
8 oz. corn sugar (dextrose)
2 oz. sodium nitrate
¼ oz. nitrite of soda
6 oz. ground white pepper
4 oz. ground coriander

Many packers have found convenience in use of ready prepared or specially prepared seasonings, as manufactured by reputable firms, in making their sausage products. Such seasonings also insure that each batch of sausage will be flavored like other batches.

Meat may be stuffed immediately in beef rounds or corresponding artificial casings, or it may be shelved in cooler at 38 degs. F. to cure overnight. If stuffed, sausage is held in cooler for curing overnight or longer. Mettwurst in beef rounds is tied in the middle to form pairs.

Following curing, sausage is smoked at 80 to 90 degs. F. for 3 to 5 hours, depending on color desired. Product is held at room temperature for several hours and is then stored at 50 degs. until shipped. Storage in too cold a cooler is likely to result in fading.

If desired, the meat may be chopped more finely by putting it in silent cutter for a short time. Braunschweiger mettwurst may be seasoned simply with pepper or some liver sausage seasoning may be used.

USING PISTACHIO NUTS

Pistachio nuts should not be ground too fine in making sausage or they eventually disappear. A sausage maker writes:

Editor THE NATIONAL PROVISIONER:

I have noticed that pistachio nuts do not show up well in my sausage and loaf products. Can you suggest a remedy?

The inquirer should be more careful in putting nuts through the grinder. If they are allowed to pass through more than once or twice they break up so fine that they cannot be distinguished in the meat mixture. They are largely used for appearance so improper handling reduces their value in product.

Pistachio nuts are sometimes run through the grinder with a small portion of the meat the last time it is ground. The nuts may also be added to meat ingredients in the mixer after grinding or chopping is completed or might be put in the silent cutter on the last revolutions.

HOW TO MAKE MEAT GRAVY

A South American meat packer asks for a formula for meat gravy. He writes:

Editor THE NATIONAL PROVISIONER:

We are anxious to secure a standard formula for meat gravy. Can you supply us with this information?

The usual practice is to take the meat stock, use enough flour to thicken and season to taste with salt and pepper.

More specifically, a formula would be as follows for 1 gallon of gravy:

8 ozs. drippings or melted fat
5¼ ozs. flour
4 qts. water or soup stock
¼ cup salt
½ teaspoon pepper.

Gravy with a distinctive flavor could be developed by using additional seasoning materials. The blend chosen could be obtained from reputable firms manufacturing ready prepared or specially prepared seasonings.

The quantities listed above can be increased to obtain any amount of finished gravy.

DRIED BEEF IN SAUSAGE

An Eastern sausage manufacturer wants to know if dried beef trimmings can be utilized in sausage. He writes:

Editor THE NATIONAL PROVISIONER:

We have heard that dried beef trimmings are sometimes utilized in sausage. Is this good practice?

Dried beef trimmings can be used in making sausage, although they are not particularly suitable for this purpose. The meat is extremely dry and has little or no binding capacity. Only a very small quantity should be used in any sausage and then only with meats of good binding power.

Dried beef scraps must be thoroughly soaked to remove salt and cooked until soft, trimmed of all gristle, ground and mixed with sausage meat. Not more than 3 or 4 lbs. should be used to each 100 lbs. of meat.

What Are Your Smoked Meat Shrinkage Costs?

Shrinkage in smoking or cooking meats is a cost item that cannot be overlooked. This invisible cost plays an important part in a profit or loss statement.

Hanging and shipping shrinkage as well as smoking or cooking shrink must also be figured.

These shrinkage costs change whenever raw material prices change.

THE NATIONAL PROVISIONER has compiled a table to assist the packer in approximating the cost of shrinkage in the production of smoked meats. This gives the cost per cwt. of percentages of weight loss at various levels of product prices.

With this table, casual impressions as to cost differentials on smoking shrinkages may be checked with actual allowances necessary to cover this cost item. Subscribers may have this table by filling out and sending in the following coupon, accompanied by a 10c stamp. In larger quantities, please write for prices.

The National Provisioner,
Old Colony Bldg., Chicago, Ill.

Please send me reprint on Smoked Meat Shrinkage Costs.

Name .....

Street .....

City..... State.....

Enclosed find a 10c stamp.

COLOR

FRESHNESS

FRAGRANCE

TEXTURE

Essential for Your Product . . .

Assured with VILTER Air Conditioning . . .

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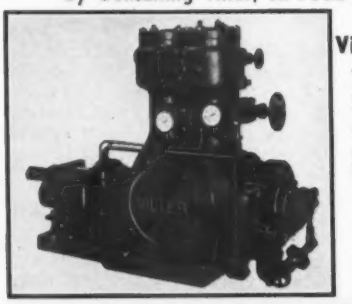

Vilter Compressors . . .

The heart of every Air Conditioning installation is the Compressor. The performance records of Vilter Compressors speak for the engineering skill and craftsmanship typical of all Vilter Equipment.

Vilter Manufacturing Company

2115 South First Street
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Superior Since 1867

VILTER

Air Conditioning
Refrigeration . . .

REFRIGERATION *Progress in 1937*

By WALTER JONES

Asst. Director of Development, Carrier Corporation

AN OUTSTANDING accomplishment of the year was the application of unit coolers of the brine spray type to large hog chill rooms. Installations have been made handling up to 3,000 hogs per day, using a multiplicity of brine spray units, each having an air handling capacity of 10,000 cu. ft. per minute.

WALTER JONES

Unit Coolers for Hog Chilling

With these cold-diffusers, using controlled forced air circulation, chilling time is greatly reduced compared to ordinary bunker coils or spray deck cooling. The resultant rapid chilling reduces the moisture removal from the carcass and holds the "shrinkage" to a low rate. Appearance of skin and cut surfaces of hogs under this rapid chilling is superior to that obtained under conditions using ordinary methods.

Improvement in sanitary conditions is especially noteworthy. Ceiling and walls are kept dry, even though the relative humidity is 95 per cent or higher. In spite of clouds of moisture formed when loading the cooler, the rapid controlled circulation keeps rooms dry and prevents formation of mold, mildew and odors. Bacteria propagation is inhibited by the use of salt brine.

No More Sour Hams

The comparatively small size of these cold diffusers reduces space requirements, and in many cases the extra height required for spray deck systems is a net gain.

Reduction in "bone" temperature of the hog is accomplished so rapidly that "sour" hams are unknown with this system. In some instances, where chilling rates have been slow with bunker coils, the plant capacity so far as chill rooms are concerned has been doubled.

Centrifugal Refrigeration

Steam turbines have been applied for many years to heat balance problems, and have been successful in producing low cost by-product power when driving electric generators and other equipment. Due to the choice of many types and their flexibility of operation, they fit admirably into the heat balance picture for each particular application.

During the past year there has been developed the comparatively new application of the use of a turbine-driven centrifugal refrigerating machine. This presents unusual opportunities to obtain low cost power for refrigeration in the meat packing plant. By utilizing the newly developed low pressure ammonia condensing cycle this unit is fitted into the heat balance of plants like those in the packing industry where steam for processing and heating is used together with direct expansion ammonia refrigeration.

Plants have been installed using this combination of equipment which are saving many thousands of dollars yearly in operating cost. The unit is very flexible in its operation and is well adapted to fluctuating loads because the variable speed turbine is under automatic control. Advantages of such equipment are as follows:

Operating Advantages

1.—Saving in Operating Costs.—Operating costs are lowered because the unit has ideal characteristics for fitting into a satisfactory heat balance. Resulting power is a by-product of steam which is generated for processing and heating. Steam passed through the turbine contains no oil and is entirely suitable for process use. Less steam need be produced because exhausts are not wasted.

2.—Saving in First Cost.—Turbine-driven centrifugal refrigeration can be installed for less money than the combination of motor drive for refrigeration with power provided from turbo-generator sets. Also, steam boiler capacity requirements are reduced.

3.—Well Adapted to Meat Packing Plants.—Unit can be used in connection with existing ammonia evaporators and piping and can be used in parallel with existing machines of the reciprocating type. It can also be used alone, displacing reciprocating compressors completely. In either case machine operates under automatic speed control, thus conforming automatically to load requirements, with attendant increase in operating economy and reduction in cost of operating labor.

4.—Operating Conditions Improved.—In this cycle of operation no oil comes in contact with the ammonia. When applied to existing plants oil which is already present in the system is gradually eliminated, thus raising general efficiency of entire ammonia system. Full flooding of evaporators can be easily and safely accomplished, because return of liquid in suction lines can cause no damage with this equipment.

The centrifugal machine is a compact unit occupying little space. Since there are very few rubbing parts and none within the compression element itself, the machine has a sustained efficiency and low maintenance cost over a long period of years. It is inherently suited to automatic regulation, which further contributes to its overall efficiency.

Steps in Refrigeration

By ROGER SPRAGUE

Baker Ice Machine Co., Inc.

IN THE field of refrigeration no development exceeds in importance the growing application in meat packing plants of equipment to closely regulate temperature and humidity in all spaces where meats are stored and processed.

ROGER SPRAGUE

Equipment such as brine spray units, which permit balancing the refrigerating load, has made decidedly worth-while savings for the packer and has enabled him to turn out better products.

Growing use of air conditioning equipment — in smokehouses, sausage kitchens, slaughtering rooms, offal departments, etc. — will enable the packer to further widen the spread between costs and selling prices. Maintaining ideal conditions of temperature and humidity is more than an important development, therefore; it is a necessity in the progressive plant.

Application of specialized equipment to flexible refrigeration loads, reduction or elimination of power waste, and reduction of hazards through use of automatic controls are other important developments.

Properly classed among recent important advancements is an awakening of the smaller packer to the fact that if he is to secure the greatest profit from his business he must take advantage of improved equipment and methods to reduce costs to a minimum and better the quality and sales appeal of his products.

(More Progress on page 37)

ARE YOU fattening these Hogs?

Install the sensational new MOREHEAD LIQUIVATOR

SAVE MONEY—IMPROVE QUALITY

Here, at last, is the surest, safest method for owners of food processing plants to slash operating costs and improve the quality of their finished products. MOREHEAD LIQUIVATORS provide continuous drainage of cooker coils, produce greatest heat transfer . . . step up production. Reclaim condensation under pressure . . . save fuel. Assure steady temperatures . . . improve quality. Many exclusive features bring you trouble-free, lifetime performance. Mail coupon TODAY for details.

Morehead Liquivators enable you definitely to check boiler evaporation against fuel consumption.

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Without obligation, I'd like the details of the new Morehead Liquivator.

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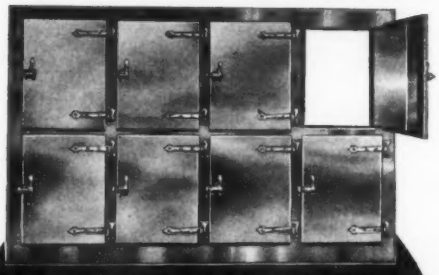
Refrigerator fronts in all special finishes, such as monel, chrome nickel steel, porcelain, etc.



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Heavy loads go over "rough spots" with ease if Reynolds' Pneumatic tires and ball-bearing casters are used. Quickly into elevators, on scales—anywhere, turn within their own length. Wide range standard sizes from 1200 to 3000-lb. capacity. A wise plant investment.

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PNEUMATIC-TIRED

STANDARD SIZES

LANSING COMPANY LANSING MICHIGAN

Chicago Kansas City Minneapolis New York
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A COMPLETE LINE OF TRUCKS *for* PACKERS

AIR CONDITIONING

MEETS PACKING PLANT STORAGE NEEDS

NIAGARA Air Conditioning Fan Coolers provide a superior method for all food storage and processing. Available in ceiling suspended and floor mounted models of many types and sizes, Niagara Fan Coolers solve any engineering requirement. They preserve weight and value in fresh food by preventing the cooling process from drying out the products.

Representatives in principal cities. Address inquiries to

NIAGARA BLOWER COMPANY
6 E. 45th Street, New York City

Niagara Floor Mounted Fan Cooler

Refrigeration *Efficiency*

By J. L. ROSENMILLER
York Mfg. Co.

MEAT packing with its diversified lines of operation has always been one of the most extensive users of refrigerating machinery. If packers' activities during the past few years are an indication, they will soon be the most important users of refrigeration and the type of applications will range over a wide scale.

The reasons for this are numerous. Great advances have been made in all departments of the meat plant, and many operations have been entirely changed. Naturally, quantity of steam required for certain process work is no longer the same as it has been in the past.

Compressor Improvement

One of the most important developments in the last few years was the introduction of the motor-driven compressor. If the balance requires a steam-engine drive, a high economy engine of the uniflow type is considered. In all cases floor space is at a premium, since in most instances engine rooms hardly can be enlarged for installation of more machinery.

In other words, we now see the high-speed, high-economy vertical ammonia compressor, which requires a minimum of floor space, in place of the low or medium-speed horizontal machine, which operates with low efficiency and requires much more floor space. As a driver, we have a synchronous motor or a uniflow steam engine instead of the Corliss engine or similar type.

Packers who have not already replaced old condensers with one of the shell and tube types will undoubtedly consider such a change within the next few years.

Development Work Ahead

The harmful effect of liquid ammonia in the suction gas, or liquid injections at machine suction, is now fully recognized by packer engineers. They can be counted upon as being already at work on schemes to trap the liquid and pump it to a place where it will be highly useful instead of dangerous and contributory to poor performance.

As we view the application of refrigeration at point of use, we can see no end to important development work.

Unit Cooler Air Conditioning

There is the spray type of air conditioning unit for rooms which are generally damp, wet and hard to control. Such units properly selected and properly installed will do the job better than anything else and also dry out the room.

In a room where drying must be guarded against a combination of coils and air unit in many cases will give unbelievably fine results in certain types of chill rooms. Air washers provide separate and individual control of air motion, refrigeration, temperature and humidity—a combination of results hard to obtain with any other arrangement.

We will hazard the guess that in the future there will be considerable work done along the line of "blast" or chill tunnels to quickly prechill certain products.

Other Improvements

The imagination can hardly grasp the extent to which improvements can be made and savings effected through the proper control of liquid ammonia feed. Float control should certainly be used. Liquid ammonia recirculation should be more extensively applied.

Packers who have tried a float control arrangement on freezer room coils—making certain, however, that the coils were first properly arranged—know what real increases in efficiency are possible where coils are properly built and where the ammonia feed is automatically controlled.

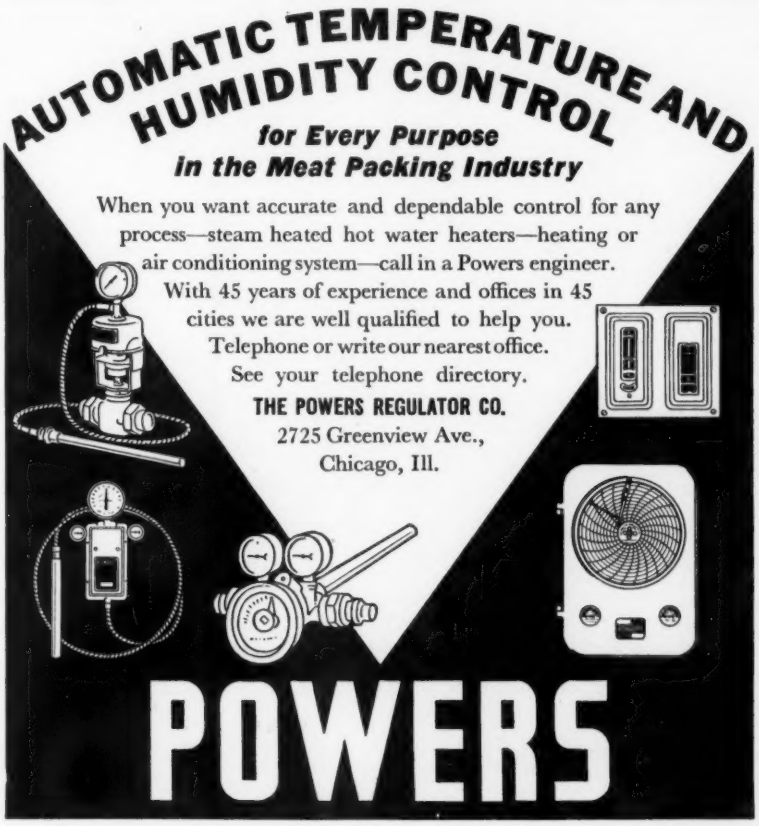
Years ago, it was often said that the packer was interested in business of meat packing only as it applied to meat. That statement is not strictly true today. He knows that since refrigeration is such an important part of his business, and such a large part of his operation, he can well afford to pay much attention to the refrigeration plant. Much more, in fact, than he at one time thought necessary.

Savings With Refrigeration

A lot of money can be saved in this department. The packer has also found that quality is tied up with refrigeration, and that he simply cannot maintain the quality of his products if his refrigeration is not correctly applied.

To sum up, the packer must have refrigeration, for without it he could not operate. Since the refrigeration operation is a very large one, the difference between economy and lack of economy amounts to a great deal of money. Therefore, he has every incentive to strive for higher economy — which means the use of modern and effective machines. To create a better market for his meat product he must improve quality, and the proper application of refrigeration will do that very thing in connection with most of his products today.

Knowing these things, it is little wonder that we, as manufacturers of refrigeration machinery, see an unlimited field for service to the meat packing industry. By close cooperation with the industry we hope to justify the general acceptance that has been given our products.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in the Meat Packing Industry
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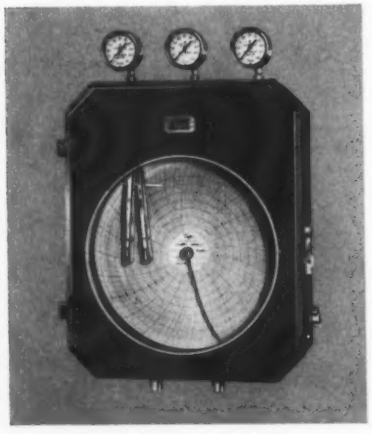
POWERS

YOU MADE THIS SALE IN YOUR PLANT

SHE PAYS her money to the butcher. But this sale started in some packer's plant.

What happens in the plant can make —or lose—unnumbered sales in retail shops throughout the country. In *your* plant, inadequate control of important variables in processing may cost you thousands of dollars in lost sales—and production expense.



HEART of Taylor Systems of Temperature and Humidity Control, the Taylor "Dubl-Duty" Fulscope Recording Controller. Adaptable to any type of regulation. Automatically keeps dry-bulb and wet-bulb temperatures precisely where they should be. Two pens write hour-to-hour temperature and humidity records. Learn how the Taylor "Dubl-Duty" Fulscope Recording Controller can protect your products —and profits.

Today, more than ever, accurate, automatic regulation of the variables, temperature and humidity, is vitally important to product quality and ultimate sales. Uncontrolled temperature and humidity cause off-flavor and rancidity, bone sours and mold, shrivel and shrink. They endanger efficient operations and cancel out expected profits.

These are some of the dollars-and-cents reasons why so many packers are installing Taylor Systems of Temperature and Humidity Control in their plants. A Taylor System is accurate, economical and durable. It maintains temperature and humidity automatically, at exactly the correct levels, protecting product quality and appearance, so important in making *your* products sought after by customers at the butcher's counter.

For more than fifteen years Taylor engineers have worked closely with packers all over the country. They bring this experience with them when they survey your plant. Let them help you decide where a Taylor System of Temperature and Humidity Control can point the way to even more efficient operation. Consult a Taylor representative, or write Taylor Instrument Companies, Rochester, N. Y. Plant also in Toronto, Canada. Manufacturers in Great Britain —Short & Mason, Ltd., London, England.

Taylor

Indicating Recording Controlling

TEMPERATURE, PRESSURE, FLOW *and* **LEVEL INSTRUMENTS**

Provisions and Lard

WEEKLY MARKET REVIEW

LARD futures market at Chicago was irregular during the past week, showing an easy tone early, strengthening at midweek, and weakening again on Thursday. Factors in the market's easiness early in the week were liquidation of January by longs, bearish stocks statistics, unsteadiness in hogs and larger hog receipts. The market firmed up later because of short covering, broader outside speculative absorption and an upturn in hogs.

There was a moderate reaction in lard prices on Thursday on freer offerings by packers resulting from hog receipts overrunning advance estimates at practically all Western markets. Strength in grains stimulated a better investment demand which was mainly satisfied by warehouse interest sales in hedging accumulating stocks. The speculative element showed little inclination to "bull" the market with swine receipts likely to expand.

Definite indications of increasing lard stocks checked upturns during the week. Strength in cotton oil at times lent some support to the lard price level. Cash demand was reported satisfactory with export clearances for England and the Continent on a larger scale. Corn prices continued to advance and the corn hog ratio for the week ended December 25 was 13.6 compared with 13.5 the previous week and 9.4 last.

Hog Receipts Increase

Receipts of hogs at Western packing points last week totaled 333,300 head compared with 333,500 the previous week and 291,300 in the same week last year.

The country's attitude in marketing hogs probably will determine price trend in products. There is a feeling that present runs will not last very long but that there will be a considerable increase in marketings in the late spring and early next summer.

Stocks of lard are increasing. Chicago supplies gained 9,561,934 lbs. during December, which was considerably above expectations, although the total lard holdings are only about 25 per cent of those of a year earlier.

The average price of hogs at Chicago at the outset of the week was $7.80 compared with $7.85 the previous week, $10.50 a year ago, $9.35 two years ago and $7.75 three years ago. Top hogs at Chicago at midweek were $8.50 for part load of fancy hogs, compared with $8.60 last week.

The average weight of hogs received at Chicago last week was 237 lbs. compared with 237 lbs. the previous week and 230 lbs. a year ago. The heavier weights and larger numbers of hogs arriving helped to bring about the increase in the stocks.

PORK.—Demand was fair and the market was steady at New York. Mess was quoted at $27.37½ per barrel and family at $28.37½ per barrel.

LARD.—Demand was fair at New York and the market was firmer. Prime western was quoted at 8.75@8.85c; middle western, 8.75@8.85c; New York City in tierces, 8⅛@8⅜c, tubs, 8⅞@9c; refined continent, 9@9⅛c; South America, 9⅛@9¼c; Brazil kegs, 9¼@9⅜c, and shortening, 9¾c in car lots, smaller lots, 10c.

At Chicago, regular lard in round lots was quoted at the January price, loose lard, 32½c under January, and leaf lard, 35c under January.

(See page 49 for later markets.)

BEEF.—Demand was fair and the market was steady at New York. Family was quoted at $27.00 per barrel.

Meat and Lard Stocks

Meat stocks at the seven principal markets of the country increased less than 23,000,000 lbs. during December, which was the smallest December increase in 10 years. Stocks on hand were 50,000,000 lbs. under those of December 31 a year ago. Lard stocks increased about 9¼ million pounds and are less than one-third of those on hand at the beginning of the last calendar year. Stocks of skinned hams and pickled bellies showed the largest increase of the major cuts. Dry salt stocks increased approximately 6,000,000 lbs.

This situation in relation to storage stocks would seem to indicate that the industry is in an unusually good position to merchandise its product, to avoid speculative chances and to protect itself on fluctuating receipts and prices.

Stocks at Chicago, Kansas City,

MEAT IMPORTS *Show Big* INCREASE

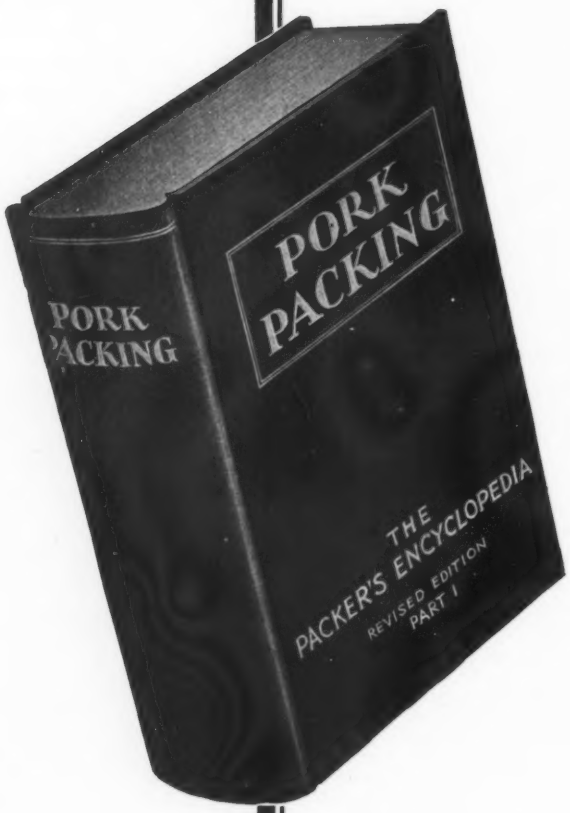
NEARLY 14,000,000 lbs. more pork was imported into the United States during the first 11 months of 1937 than was exported. Imports in the 1937 period were nearly double those of a year earlier. Beef imports were slightly less than those of 1936, and were about 8 times as large as beef exports.

In addition to imports in the form of meat, animals imported for slaughter in the 11 months of 1937 were well above those of the 1936 period. Live hog imports totaled 86,365 head compared with 68,059 head in the 1936 period. Cattle and calves for slaughter totaled 486,662 head, 100,000 more than in the 11 months of 1936.

Imports and exports of meats for the 11 months of 1937 compared with the first 11 months of 1936 are reported as follows:

	Nov., 1937.	Nov., 1936.	11 mos., 1937.	11 mos., 1936.
IMPORTS.				
Pork—				
Pork, fresh	981,127	966,897	19,747,083	11,048,494
Hams, shoulders & bacon	3,277,446	2,734,480	44,139,738	22,524,454
Pork, pickled, salted & other	602,183	213,078	5,680,784	2,476,536
Total pork	4,860,756	3,914,455	69,567,605	36,049,484
Beef and Veal—				
Beef, fresh	412,466	226,153	4,247,563	3,771,991
Veal, fresh	8,727	4,741	180,776	96,344
Beef & veal, pickled or cured	9,318	146,038	1,663,653	2,000,705
Beef, canned	6,968,411	3,702,750	84,731,726	86,000,609
Total beef & veal	7,398,922	4,079,682	90,823,718	91,869,631
EXPORTS.				
Pork—				
Fresh, carcasses	12,642	20,047	146,330	151,027
Fresh, loins & other	674,285	748,354	3,149,506	2,366,029
Cumberland & Wiltshire sides	.....	17,081	42,353	450,585
Hams & shoulders	4,900,706	4,216,107	35,778,793	39,795,659
Bacon	299,324	269,504	2,368,298	3,868,494
Pickled	1,359,469	667,508	7,936,838	10,136,754
Canned	546,808	882,764	6,553,849	7,015,586
Total pork	7,793,234	6,821,365	55,975,967	63,784,134
Lard	18,467,154	9,663,126	114,682,659	102,695,623
Beef and Veal—				
Beef & veal, fresh	230,669	222,835	4,126,875	3,858,192
Beef, cured	260,913	597,090	5,066,752	7,801,068
Beef, canned	213,527	200,794	2,616,841	1,773,013
Total beef & veal	705,109	1,020,719	11,810,468	13,432,273
Sausage—				
Sausage	154,453	210,905	2,476,173	2,092,896
Sausage ingredients	118,704	233,735	1,201,921	1,913,810

Pork Department PROFITS



depend on how you operate the pork division of your plant. So important is this activity that this whole 360-page volume is devoted to discussion of the problems which come up in pork packing—practical solutions that make for greater efficiency in operation.

KNOW YOUR COSTS — Particular emphasis has been laid on figuring of tests, which plays such an important part in pork operations. 100 pages of tables showing results of actual tests are a guide to the packer who wants to know how his product will figure out.

CONTENTS

Buying — Killing — Handling Fancy Meats —Chilling and Refrigeration—Cutting—Trimming—Cutting Tests—Making and Converting Pork Cuts—Lard Manufacture — Provision Trading Rules — Curing Pork Meats—Soaking and Smoking—Packing Fancy Meats—Sausage and Cooked Meats — Rendering Inedible Products—Labor and Cost Distribution—and Merchandising.

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FOREIGN: U. S. FUNDS

FLEXIBLE LEATHER $1.00 EXTRA

Utilizing the hog carcass to best advantage is a day-to-day problem, requiring not only constant study of markets, but also application of the results of this study to daily operations in the plant. "PORK PACKING" tells you how to match your output to the market demand.

For the Sausage Manufacturer

Chapter XIV: Stuffing the Casings—Handling large sausages—Smokehouse temperatures—Use of cookers and vats—Avoiding mold and discoloration—Trimmings—Curing—Mixing—Chopping and stuffing—Casings—Surface mold—Dry sausage—Sausage cost accounting—Sausage formulas—Manufacturing instructions—Container specifications—Preparing boiled hams—Making baked hams.

The sooner you order your copy the sooner you'll profit. ORDER NOW!

THE NATIONAL PROVISIONER

407 South Dearborn Street Chicago, Illinois

Omaha, St. Louis, East St. Louis, St. Joseph and Milwaukee, on December 31, 1937, with comparisons as compiled by THE NATIONAL PROVISIONER:

	Dec. 31, '37. lbs.	Nov. 30, '37. lbs.	Dec. 31, '36. lbs.
Total S.P. meats	96,185,660	82,855,250	157,846,537
Total D.S. meats	17,752,577	11,771,098	18,848,425
Other cut meats.	13,301,977	9,978,013	20,552,833
Total all meats.	127,240,214	104,604,341	197,247,795
P.S. lard	20,012,218	9,431,211	85,939,453
Other lard	9,252,304	6,667,646	12,711,860
Total lard	29,264,522	16,098,857	98,651,313
S.P. regular hams	18,721,675	18,244,161	37,014,692
S.P. skinned hams	37,691,260	32,118,466	51,898,518
S.P. bellies	31,837,797	26,219,023	46,416,362
S.P. picnics	7,882,228	6,220,580	22,265,658
D.S. bellies	9,946,959	6,276,427	11,745,570
D.S. fat backs	7,452,619	5,265,948	6,237,719

PORK AND LARD EXPORTS

Increased volume of shipments of lard and pork to foreign countries gave the export branch of the packing industry a more hopeful note during the closing months of 1937. Foreign buyers were finding it possible to purchase more lard, hams and other products at lower prices prevailing during this period.

Lard exports during 1937, totaling around 132,000,000 lbs., topped 1936 exports of 112,168,000 lbs. by almost 20,000,000 lbs. Cured pork exports of around 54,000,000 lbs. compared with 46,533,641 lbs. in 1936. While the spurt in ham and pork shipments was attributed to Christmas trade, lard exports were at a comparatively high level in October, November and December.

Exports of American hog lard to Cuba in November were the heaviest for any month since the signing of the U. S.-Cuban reciprocal trade agreement, totaling 5,387,844 lbs. as against 3,791,841 lbs. during October and 3,215,000 lbs. in November, 1936.

CHICAGO PROVISION STOCKS

Stocks of meat and lard on hand in Chicago are reported as of January 1, 1938:

	Jan. 1, 1938.	Dec. 1, 1937.	Jan. 1, 1937.
Pork, bbls.	11,494	8,278	15,385
P.S. lard, lbs.	16,318,769	7,233,878	75,342,959
Other lard, lbs.	4,810,282	4,333,239	5,186,732
D.S. Cl. Bellies[1].	3,901,895	2,049,022	4,460,128
D.S. Cl. Bellies[2].	44,042	86,370	34,000
D.S. Rib Bellies[1].	99,900	76,271	420,577
Ex. Sh. Cl. Sides[1]	2,500	1,600	4,600
D.S. fat backs, lbs.	2,255,903	1,545,646	2,498,253
D.S. Shldrs., lbs.	69,699	78,123	80,394
S.P. hams, lbs.	9,037,609	8,620,518	19,245,473
S.P. Sknd. hams, lbs.	18,986,372	16,036,645	25,098,616
S.P. bellies, lbs.	14,030,439	11,245,612	23,456,686
S.P. picnics, S.P. Boston Shldrs., lbs.	3,582,674	2,869,311	12,037,895
S.P. Shldrs, lbs.		1,000	15,000
Other cut meats, lbs.	6,255,265	5,139,334	13,068,032
Total cut meats, lbs.	58,286,298	47,749,452	100,419,654

[1]Made since Oct. 1, 1937.
[2]Made before Oct. 1, 1937.

Hog Cut-Out Results

SLIGHTLY better product values and hog costs averaging somewhat lower than a week ago resulted in cut-out losses below those of last week on all but the heaviest average of hogs shown on the test on this page.

Demand was strong throughout the four-day period of the current week at Chicago for good light hogs, this kind being rather scarce and most packers looking for good butchers weighing 230 lbs. and under. There was good demand for the lighter averages of pork cuts and much weakness in spots on the heavier weights.

Receipts at the seven principal markets for the four-day period totaled 286,700 head compared with 239,200 a week ago and 300,700 a year ago when receipts included many unfinished hogs and pigs, forced on the market for lack of feed. Top for the week at $8.45 was paid on Wednesday with $8.50 paid for a part load of fancy hogs. Closing top was $8.40, light hogs weighing 210 lbs. down, all selling close to the top and 190 lbs. down commanding top prices. Good butchers weighing up to 300 lbs. moved at $7.30 to $7.90 at the close. These hog prices reflected trade demand for light cuts and little disposition to follow price advances on cuts of any weight.

The test on this page is worked out on the basis of live hog and green product prices at Chicago during the first four days of the current week, with representative costs and credits.

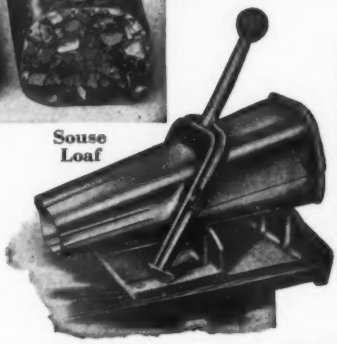
HOW SHORT FORM HOG CUTTING TEST RESULTS ARE FIGURED

(Hog prices and product values based on THE NATIONAL PROVISIONER DAILY MARKET SERVICE, cutting percentages taken from actual tests in Chicago plants.)

	Per Cent live wt.	Price per lb.	Value per cwt. alive	Per Cent live wt.	Price per lb.	Value per cwt. alive	Per Cent live wt.	Price per lb.	Value per cwt. alive
	180-220 lbs.			220-260 lbs.			260-300 lbs.		
Regular hams	14.00	14.9	$ 2.09	13.70	13.8	$ 1.89	13.40	12.6	$ 1.69
Picnics	5.70	11.6	.66	5.40	11.0	.59	5.10	9.9	.50
Boston butts	4.00	14.0	.56	4.00	14.0	.56	4.00	14.0	.56
Loins (blade in)	9.80	14.3	1.40	9.50	13.5	1.28	9.00	13.0	1.17
Bellies, S. P.	11.00	15.6	1.72	9.70	13.4	1.30	3.10	12.3	.38
Bellies, D. S.	....	....	....	2.00	9.6	.19	9.90	9.3	.92
Fat backs	1.00	5.5	.06	3.00	6.1	.18	5.30	7.8	.41
Plates and jowls	2.50	6.1	.15	3.00	6.1	.18	3.30	6.1	.20
Raw leaf	2.10	7.5	.16	2.20	7.5	.17	2.10	7.5	.16
P. S. lard, rend, wt.	12.80	7.9	1.01	11.60	7.9	.92	10.20	7.9	.81
Spareribs	1.60	10.3	.16	1.60	10.3	.16	1.50	10.3	.15
Trimmings	3.00	6.8	.20	2.80	6.8	.19	2.70	6.8	.18
Feet, tails, neckbones	2.00	....	.09	2.00	....	.09	2.00	....	.09
Offal and misc	....	....	.35	....	....	.35	....	....	.35
TOTAL YIELD AND VALUE	69.50		$ 8.61	70.50		$ 8.05	71.50		$ 7.57
Cost of hogs per cwt		$ 8.27			$ 7.96			$ 7.69	
Condemnation loss		.04			.04			.04	
Handling & overhead		.56			.52			.48	
TOTAL COST PER CWT ALIVE		$ 8.87			$ 8.52			$ 8.21	
TOTAL VALUE		8.61			8.05			7.57	
Loss per cwt		.26			.47			.64	
Loss per hog		.52			1.13			1.79	

Luxury Loaf | Liver Loaf | Chicken Loaf | Souse Loaf

Increase LOAF SALES



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Pullman loaves or small hams produced in sizes 02L-E, 1-0-E, 02S-E, or 02G-E, may be inserted into 4½-inch High Stretch Casings by using our new Stuffer No. 2. Ask for particulars.

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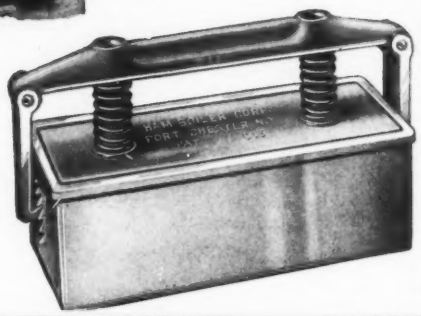
Made of Stainless Steel with Cast Aluminum Base

Manufactured in two sizes.
No. 1 for 3¾″ casing
No. 2 for 4½″ casing



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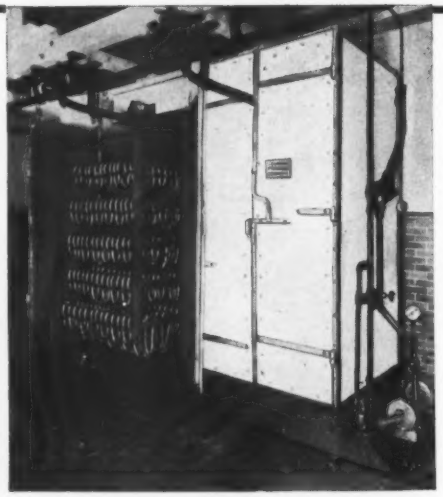


Manufactured under the following patents: No. 1,690,449 dated Nov. 6, 1928, and No. 1,921,231 dated Aug. 8, 1933. Other Patents Pending.

There is a standard JOURDAN Cooker that will meet your particular requirements. Take advantage of liberal trial privileges now in effect. Write for further information.

Are your customers demanding higher quality?

GET IT *from* JOURDAN!

Meet your customer's demands *quickly* and *easily* at no extra cost . . . with the JOURDAN PROCESS COOKER! Repeat the same fine quality sausage batch after batch . . . bring *color* under *control* and watch your sales jump.

The JOURDAN method of sausage cooking guarantees exclusive results . . . there can be no overcooking, no undercooking; no burst or tangled sausage. *Regulated* cooking is uniform *always!*

Order your JOURDAN COOKER now . . . eliminate bothersome and timely handling operations. Start production on the sausage your customers would *like* to have! Send for complete details.

JOURDAN PROCESS COOKER

Jourdan Process Cooker Co., 814-32 W. 20th St., Chicago, Ill.

PORK PRODUCTS EXPORTS

Exports of provisions originating in the United States and Canada from Atlantic and Gulf ports:

To	Week ended Dec. 31, 1937.	Week ended Jan. 2, 1937.	Nov. 1 1937 to Dec. 31, 1937.
BACON AND HAM.			
	M lbs.	M lbs.	M lbs.
United Kingdom	4,882	3,580	22,817
Continent	.....	.....	423
West Indies	34	6	118
Other Countries	.....	.....	36
Total	4,916	3,586	23,394
LARD.			
	M lbs.	M lbs.	M lbs.
United Kingdom	2,050	1,691	30,324
Continent	675	173	3,593
Sth. and Ctl. America	48	.....	733
West Indies	355	11	2,502
Other Countries	.....	1	83
Total	3,128	1,876	37,235

TOTAL EXPORTS BY PORTS.

From	Pork, bbls.	Bacon and Ham M lbs.	Lard, M lbs.
New York	.....	223	1,511
Boston	.....	100	6
New Orleans	.....	.....	394
W. St. John	.....	3,411	976
Halifax	.....	1,172	241
Total week	.....	4,916	3,128
Previous week	.....	3,948	3,958
2 weeks ago	.....	4,562	3,275
Cor. week 1936	.....	3,586	1,876

SUMMARY NOV. 1, 1937 TO DEC. 31, 1937.

	1937.	1936.
Pork, M lbs.	.....	12
Bacon and Ham, M lbs.	23,393	20,581
Lard, M lbs.	37,235	23,987

MEAT IMPORTS AT NEW YORK

For week ended December 31, 1937:

Point of origin.	Commodity.	Amount lbs.
Canada	Fresh chilled pork cuts	1,730
	Smoked bacon	4,525
	Fresh chilled beef livers	170
	Sausage	765
	Fresh frozen ham	21,037
Czechoslovakia	Cooked ham in tins	1,606
Denmark	Cooked ham in tins	6,477
England	Veal and tongue paste in jars	376
	Bouillon cubes	10,000
France	Liverpaste in tins	5,034
	Cooked tripe in tins	875
Holland	Cooked ham in tins	45,788
	Smoked ham	4,084
Hungary	Cooked ham in tins	190,363
Italy	Smoked ham	1,195
	Sausage	7,785
	Salami	430
Latvia	Cooked ham in tins	8,639
Lithuania	Fresh frozen pork cuts	103,715
Poland	Cooked ham in tins	334,858
	Salami	825
	Cooked pork loins in tins	15,702
	Tinned luncheon meat	33,984
	Smoked bacon	3,891
	Fresh frozen pork cuts	214,065
	Dry salt pork cuts	4,464
Rumania	Cooked ham in tins	3,522

CANADIAN BRANDED BEEF

Beef branded in Canada during November, 1937, totaled 2,325,245 lbs. compared with 3,173,515 lbs. in the same month of 1936. For the eleven months of 1937 the amount branded totaled 34,513,475 lbs. against 41,159,959 lbs. in 1936 period.

Chicago Provision Markets

REPORTED BY THE NATIONAL PROVISIONER DAILY MARKET SERVICE

FUTURE PRICES

FRIDAY, DECEMBER 31, 1937.

LARD—	Open.	High.	Low.	Close.
Dec.	.....	.....	.....	8.07½b
Jan.	8.00	8.10	8.00	8.10ax
Mar.	.....	.....	.....	8.37½b
May	8.62½	8.67½	8.62½	8.67½-65
July	8.72½	8.77½	8.72½	8.77½

SATURDAY, JANUARY 1, 1938.
Holiday. No market.

MONDAY, JANUARY 3, 1938.

LARD—				
Jan.	8.05	8.10	8.02½	8.07½-10
Mar.	8.35	.....	.....	8.35b
May	8.65	8.67½	8.62½	8.65b
July	8.72½	8.77½	8.72½	8.77½ax

TUESDAY, JANUARY 4, 1938.

LARD—				
Jan.	8.02½	8.12½	8.00	8.12½b
Mar.	8.35	8.45	8.35	8.45b
May	8.65	8.77½	8.65	8.77½-75
July	8.75	8.87½	8.75	8.87½b

WEDNESDAY, JANUARY 5, 1938.

LARD—				
Jan.	8.15	8.20	8.15	8.20ax
Mar.	8.60	8.60	8.57½	8.57½
May	8.82½-85	8.87½	8.82½	8.85
July	8.97½	9.00	8.97½	9.00
Sept.	9.07½	.....	.....	9.07½

THURSDAY, JANUARY 6, 1938.

LARD—				
Jan.	8.12½	8.25	8.12½	8.25
Mar.	8.52½	8.75	8.52½	8.75
May	8.77½	8.97½	8.75	8.97½ax
July	8.92½	9.17½	8.90	9.15ax
Sept.	.....	.....	.....	9.25b

FRIDAY, JANUARY 7, 1938.

LARD—				
Jan.	8.32½	8.45	8.32½	8.45b
Mar.	8.82½	8.90	8.82½	8.90b
May	9.02½-05	9.10	9.00	9.10b
July	9.22½	9.25	9.15	9.25b
Sept.	.....	.....	.....	9.40b

Key: ax, asked; b, bid; n, nominal; —, split.

No futures were quoted on Clear Bellies this week.

DECEMBER HOGS HEAVY

Hogs sold at the five large markets of the country during December averaged heavier than in December, 1936, but the average cost was lower. The weight increase ranged from 2 lbs. at E. St. Louis to 38 lbs. at Omaha. Weights and costs reported by the Bureau of Agricultural Economics were as follows:

	Average Weight. Dec. '37. lbs.	Dec. '36. lbs.	Average Cost. Dec. '37.	Dec. '36.
Chicago	235	226	$7.90	$9.96
Kansas City	231	213	7.66	9.60
Omaha	238	200	7.57	9.45
E. St. Louis	224	222	7.97	9.98
St. Paul	230	213	7.55	9.60

CANADIAN STORAGE STOCKS

Stocks of meat in Canada:

	Dec. 1, 1937.	Nov. 1, 1937.	5-yr. Dec. av.
Beef	28,625,374	25,678,698	24,338,154
Veal	4,163,384	4,349,873	3,516,732
Pork	32,655,706	26,378,896	30,411,658
Mutton & lamb	5,042,780	3,402,262	6,731,098

CASH PRICES

Based on actual carlot trading Thursday, January 6, 1938.

REGULAR HAMS.

	Green.	*S.P.
8-10	18¼	19
10-12	17¾	18
12-14	16¾	16¾
14-16	15½	16
10-16 Range	15¾	....

BOILING HAMS.

	Green.	*S.P.
16-18	13¼	15½
18-20	13	15½
20-22	13	15¼
16-20 Range	13	....
16-22 Range	13	....

SKINNED HAMS.

	Green.	*S.P.
10-12	17¾	18
12-14	16½	17
14-16	15	15¾
16-18	14½	15
18-20	13¾	13¾
20-22	13	13
22-24	12½	12½
24-26	12	12
25-30	11¼	11¾
30 and up	11¼	11½

PICNICS.

	Green.	*S.P.
4- 6	12½	12¼
6- 8	11¾	11
8-10	10¾	10½
10-12	10	10¼
12-14	10	10¼

Short Shank ½c over.

BELLIES.
(Square cut seedless)

	Green.	*D.C.
6- 8	18¼	19
8-10	17¾	18½
10-12	16¼	17
12-14	14½	15¾
14-16	13½	15
16-18	12¾	14½

*Quotations represent No. 1 new cure.

D. S. BELLIES.

	Clear.	Rib.
14-16	10¾	....
16-18	10¾	....
18-20	10½	....
20-25	10¾	10¾
25-30	10¼	10¼
30-35	9¾	9¾
35-40	9¾	9¾
40-50	9½	9½

D. S. FAT BACKS.

6- 8	6½
8-10	6¾
10-12	7½
12-14	8
14-16	9½
16-18	10
18-20	10¼
20-25	10½

OTHER D. S. MEATS.

Extra Short Clears	35-45	9¼n
Extra Short Ribs	35-45	9½n
Regular Plates	6- 8	8
Clear Plates	4- 6	6
Jowl Butts		7½
Green Square Jowls		9½
Green Rough Jowls		7½

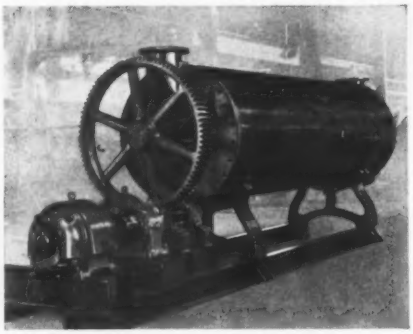
LARD.

Prime Steam, cash	8.30n
Prime Steam, loose	8.05b
Neutral, in tierces	10.00n
Raw Leaf	8.00n

CHICAGO PROV. SHIPMENTS

Provision shipments from Chicago for the week ended January 1, 1938, were as follows:

	Week Dec. 31.	Previous week.	Same week '36.
Cured meats, lbs.	10,903,000	11,813,000	7,436,000
Fresh meats, lbs.	44,254,000	46,411,000	35,208,000
Lard, lbs.	3,550,000	3,228,000	1,643,000



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- **HERRINGBONE REDUCER**
- **JACKETED HEADS**

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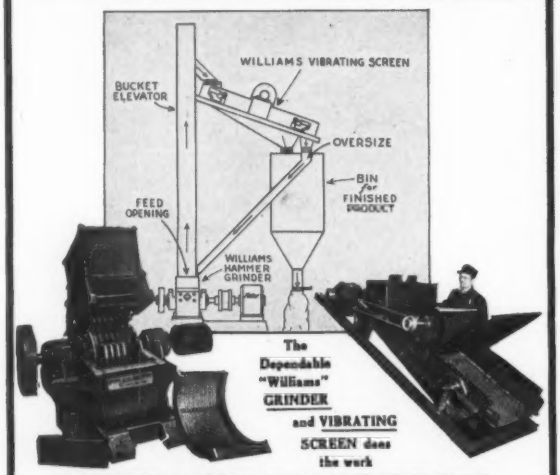
KEEBLER ENGINEERING CO.
1636 WEST 63rd ST., CHICAGO, ILL.

NOW—Ground By-Products with no oversize Bone Particles



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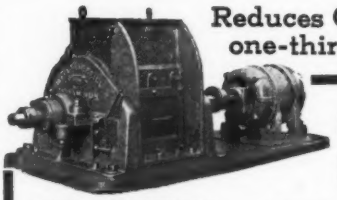

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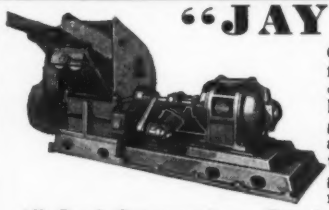

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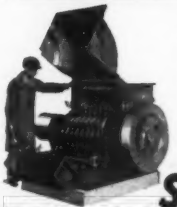

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Tallows and Greases

WEEKLY MARKET REVIEW

TALLOW—There was a little more activity and a slightly firmer trend in tallow at New York during the first week of 1938. It was estimated that about 250,000 lbs. of extra changed hands at 6c, delivered, or unchanged from previous sales. There were unconfirmed reports of some business at 6⅛c. It was learned that there had been sales of tallow, slightly better than extra, at 6⅛c from New York for Georgia. Offerings were not pressing and there was more soaper interest in the market. Consumers showed no disposition to come up in their ideas, however.

At New York, special was quoted at 5⅛c; extra, 6@6⅛c, delivered, and edible, 7c nominal.

South American tallow at New York continued quiet and relatively too high. No. 1 was quoted at 4¾c, c.i.f. New York; No. 2, 4½c, c.i.f., and edible, 4.95c, c.i.f.

Tallow futures on the New York Produce Exchange were moderately active. March traded at 6.20 to 6.17 and the trend was slightly better.

There was no London tallow auction this week. At Liverpool, Argentine beef tallow, January shipment, was 6d higher on the week at 22s 6d. Australian good mixed, January shipment, was unchanged at 21s 3d.

Market for tallow at Chicago was quiet during the past week but prices were steady. Tank of No. 3 tallow sold late last week at 4⅜c, Midwest point; car of prime sold at 6⅛c, Chicago. Tank No. 1 tallow sold Monday at 5c, Cincinnati, and tank special at 5½c, Cincinnati. Two tanks off-prime tallow sold Tuesday at 6c, Chicago. Two tanks fancy tallow sold at 6¼c, Midwest point, from outside. Big consumer still bidding 6c, Chicago and Cincinnati for prime; producers asking 6¼c. Edible tallow was offered Tuesday at 6⅜c, Cincinnati, but unsold. Chicago quotations, loose basis, on Thursday were:

Edible tallow	6¼@6⅜
Fancy tallow	6⅛@6¼
Prime packers	6⅛@6¼
Special tallow	5¼@5½
No. 1 tallow	4¾@5

STEARINE—The market was rather quiet but firmer in tone in New York. Oleo was quoted at 7¼@7½c, plant, or ¼c better than the previous week.

The market was quiet and steady at Chicago with oleo quoted at 6½@6¾c.

OLEO OIL—Demand was moderate at New York following the holidays and prices were unchanged to ½c lower than during the previous week. Extra was quoted at 9½@10c; prime, 8½@9c, and lower grades, 7½@8c.

Demand was moderate at Chicago and the market was off ½@1c. Extra was quoted at 9½c.

(See page 49 for later markets.)

LARD OIL—Interest was routine at New York and the market was without quotable change. No. 1 was quoted at 8¾c; No. 2, 8½c; extra, 10¾c; extra No. 1, 9¼c; extra winter strained, 11c; prime edible, 12¾, and inedible, 11¾c.

NEATSFOOT OIL—Demand was quiet at New York but the market was steady and unchanged. Cold test was quoted at 17¼c; pure, 11¾c; prime, 11c; extra, 9½c, and extra No. 1, 9c.

GREASES—A fair turnover was reported in greases at New York, with 4⅜c and 4½c paid for yellow and house. Demand subsequently subsided and best bids were at 4⅜c. Buying interest in the market appeared to be mostly from dealers rather than from soapers. However, producers were rather firm in their ideas as they were well sold up for January and possibly early next month. A slightly better tone in tallow and other commodities aided sentiment in the grease markets. There is a disposition to look for better demand in the future as stocks must be replaced.

At New York, choice white grease was quoted at 7⅛c; yellow and house, 4⅜@4½c, and brown, 3⅞@4c.

Market for greases at Chicago was somewhat quiet. Tank good quality 15 acid yellow grease sold early this week at 4⅛c, Cincinnati. There was a bid of 4¾c, Chicago, for very good yellow grease on Wednesday to cover short sale. Couple tanks choice white grease sold Wednesday at 6⅛c, Chicago; bidding 6c on Thursday and 4c Cincinnati for brown grease. Chicago quotations, loose basis, on Thursday were:

Choice white grease	6 @6⅛
A-white grease	5¼@5½
B-white grease	@5
Yellow grease, 10-15 f.f.a.	4½@4¾
Yellow grease, 15-20 f.f.a.	@4¼
Brown grease	3⅞@4

ANIMAL FAT EXPORTS

Exports of animal fats and oils during November, 1937, are reported as follows:

	Quantity, lbs.	Value.
Oleo oil	762,489	$ 95,605
Oleo stock	355,007	46,468
Oleo stearine	88,045	7,924
Oleomargarine	9,658	1,328
Neutral lard	153,408	19,210
Cooking fat, not lard	224,605	25,100
Lard	18,313,746	1,980,307
Tallow, edible	15,805	2,456
Tallow, inedible	1,984	195
Other fats and greases	313,877	24,695
Grease stearine	40,667	1,676
Neatsfoot oil	82,103	11,148
Gelatine	12,191	5,120
Oleic acid	14,143	1,504
Stearic acid	4,806	830

BY-PRODUCTS MARKETS

Chicago, January 6, 1938.

By-products markets show a little more activity with sales of some products on a considerable scale and at some price improvement.

Blood

Blood market stronger and quoted at $3.10@3.15, Chicago.

	Unit Ammonia.
Unground	$3.10@3.15

Digester Feed Tankage Materials.

Market stronger. Second grade 6 to 10% product quoted at $3.00 & 10c, Chicago.

Unground, 10 to 12% ammonia	$3.10@3.15 & 10c
Unground, 6 to 10%, choice quality	@3.25 & 10c
Liquid stick	@2.50

Packinghouse Feeds.

Market active at quoted prices.

	Carlots, Per ton.
Digester tankage meat meal, 60%	$ @50.00
Meat and bone scraps, 50%	@45.00
Raw bone meal for feeding	@35.00
Special steam bone meal	@27.50

Bone Meals (Fertilizer Grades).

Market largely nominal with prices quoted f.o.b. Chicago.

	Per ton.
Steam, ground, 3 & 50	$ @19.00
Steam, ground, 2 & 26	18.00@19.00

Fertilizer Materials.

Market nominal.

	Per ton.
High grd. tankage, ground, 10@11% am.	$ @ 2.75 & 10c
Bone tankage, ungrd., low gr., per ton	@15.00
Hoof meal	@ 3.25

Dry Rendered Tankage.

Dry rendered tankage market steady to strong.

Hard pressed and expeller unground per unit protein	$ @.65
Soft prsd. pork, ac. grease & quality, ton	@35.00
Soft prsd. beef, ac. grease & quality, ton	@30.00

Gelatin and Glue Stocks.

Market for gluestock continues nominal. Prices quoted for l.c.l. lots, c.a.f. Chicago. Full carlots at higher prices.

	Per ton.
Calf trimmings	$ @20.00
Sinews, pizzles	@18.00
Cattle jaws, skulls and knuckles	@16.00
Hide trimmings	@15.00
Pig skin scraps and trim, per lb., l.c.l.	@ 5½c

Horns, Bones and Hoofs.

Market quiet and nominal.

	Per ton.
Horns, according to grade	$45.00@75.00
Cattle hoofs	@35.00
Junk bones	@15.00

(Note—Foregoing prices are for mixed carloads of unassorted materials indicated above.)

Animal Hair.

Market for hog hair nominal with

crude summer take-off $45 per ton c.a.f. Chicago. Winter take-off $80@85 per ton, Chicago.

Coil and field dried hog hair	2¼c@ 4¼c
Processed black winter, per lb.	6½c@ 9c
Cattle switches, each*	2c @ 2½c

*According to count.

EASTERN FERTILIZER MARKETS

(Special Cable to The National Provisioner.)

New York, January 5, 1938.

Ground dried blood last sold and is now being offered at $3.00 per unit of ammonia, f.o.b. New York. The demand for blood is light and stocks are accumulating.

Ground fertilizer tankage is offered at $2.80 and 10c, and unground feeding tankage at $2.75 and 10c, f.o.b. local shipping points, and the demand is only fair.

Quite a few of the fertilizer manufacturers have completed their first mixing and are not in the market.

Dry rendered tankage, 50/55% protein, has been selling at 62½c per unit, f.o.b. New York, and has been moving freely at this price.

Bone meal, both steamed and raw, are in light demand and prices remain about the same.

FERTILIZER PRICES

BASIS NEW YORK DELIVERY.

Ammoniates.	
Ammonium sulphate, bulk, per ton, basis ex vessel Atlantic ports, Jan.-June shipment	@29.50
Ammonium sulphate, double bags, per 100 lbs. f.a.s. New York	nominal
Blood, dried, 16% per unit	@ 3.00
Fish scrap, dried, 11% ammonia, 10% B. P. L., f.o.b. fish factory	nominal
Fish meal, foreign, 11½% ammonia, 10% B. P. L. c.i.f. spot	@45.00
Jan. shipment	@45.00
Fish scrap: acidulated, 7% ammonia, 3% A.P.A. f.o.b. fish factories	2.75 & 50c
Soda nitrate, per net ton: bulk, Jan.-June	@27.00
In 200-lb. bags, Jan.-June	@28.30
In 100-lb. bags, Jan.-June	@29.00
Tankage, ground, 10% ammonia, 15% B. P. L. bulk	2.80 & 10c
Tankage, unground, 10-12% ammonia, 15% B. P. L. bulk	2.75 & 10c
Phosphates.	
Foreign bone meal, steamed, 3 and 50 bags, per ton, c.i.f.	@23.50
Bone meal, raw, 4½% and 50%, in bags, per ton, c.i.f.	@28.50
Superphosphate, bulk, f.o.b. Baltimore, per ton, 16% fat	@ 9.00
Dry Rendered Tankage.	
50% unground	@62½c
60% unground	@70c

ANIMAL OILS

(Basis Chicago.)

	Per lb.
Prime edible lard oil (max. 1% f.f.a.)	12¼
Prime burning oil (max. ½% f.f.a.)	11⅝
Prime lard oil (inedible) (max. 2% f.f.a.)	11¼
Extra W. S. lard oil (2-4% f.f.a.)	10½
Extra lard oil (max. 5% f.f.a.)	10⅛
Extra No. 1 lard oil (7-12% f.f.a.)	8⅝
Special No. 1 lard oil (max. 15% f.f.a.)	8½
No. 1 lard oil (15-18% f.f.a.)	8¼
No. 2 lard oil (max. 22% f.f.a.)	8
Acidless tallow oil (max. ½% f.f.a.)	9
20° C. T. neatsfoot oil (max. 1% f.f.a.)	16½
Pure neatsfoot oil (max. 1% f.f.a.)	11¼
Prime neatsfoot oil (max. 5% f.f.a.)	10½
Extra neatsfoot oil (max. 12% f.f.a.)	9
No. 1 neatsfoot oil (max. 15% f.f.a.)	8½

FATS *and* OILS

Market Factors for 1938 More Cotton Oil Used

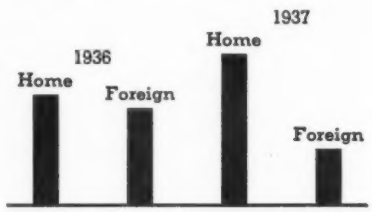
SUPPLY of domestic vegetable oils available for consumption during 1938 is larger than in any recent year, due to the huge cotton crop of 1937. Expected factors in the markets for edible and inedible fats and oils during 1938 are low lard inventories, but a probable expansion of lard production; heavy stocks of marine animal oils; fairly stable production of beef fats, and larger supplies of soy bean and corn oil.

Prices of vegetable oils at the end of 1937 were considerably lower than on the same date in 1936, and were regarded by many observers as being at a bottom from which they would be sure to advance with any constructive developments in the general business situation. Crude cottonseed oil was quoted on December 30, 1937, at 5¾c bid, and January futures were at 7.08 @ 7.10, compared with crude at around 10 @ 10¼c and January futures at 11.43 on December 30, 1936.

Soy bean oil ended 1937 at 5½ @ 5⅝c, compared with 9¼ @ 9⅝c on the like date in 1936; cocoanut oil (without excise) at 3¾c, Pacific Coast, compared with 9c on December 30, 1936, and palm oil at 3½ @ 3¾c, against 6 @ 6½c at the close of 1936.

More Cotton Oil in Margarine

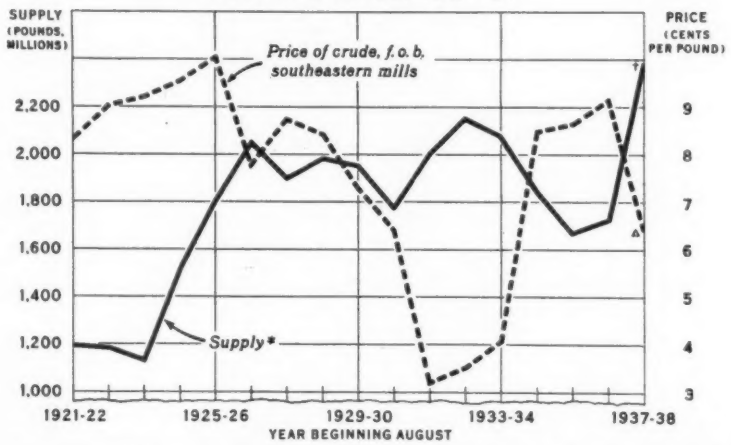
Increasing use of cottonseed oil as an ingredient of oleomargarine has been one feature of the trade in 1937. Domestic oils used in margarine during the first 10 months of 1937 (including milk) amounted to 236,806,191 lbs., of which 132,356,372 lbs. was cottonseed oil. Foreign oil and fat ingredients used in margarine totaled 83,252,424 lbs. In the like period last year, 179,199,207 lbs. of domestic oils and fats were used, including 85,044,326 lbs. of cottonseed oil. Foreign oils utilized totaled 146,617,146 lbs.



While the supply of domestic cottonseed oil for the year ending July 31, 1938 has been estimated at around 2,500,000,000 lbs., composed of about 2,000,000,000 lbs. of new oil and 485,000,000 lbs. carryover, unprecedentedly heavy consumption during the closing months of 1937 has diminished this stock considerably. Disappearance of refined oil during the last five months of 1937 (December estimated) totaled around 800,000,000 lbs., compared with 582,000,000 lbs. in the like 1936 period. Disappearance during the year ended July 31, 1937, amounted to 1,461,371,000 lbs.

No statistics are available on production of shortening (in which bulk of cottonseed oil is used) but estimates based on consumption of cottonseed oil during 1937 indicate that shortening output probably exceeded the record of 1,553,876,308 lbs. during 1936.

COTTONSEED OIL, CRUDE: SUPPLY AND PRICE, UNITED STATES, 1921-37



Cottonseed oil prices are affected by supplies of cottonseed oil and also by supplies and prices of lard and competing vegetable oils, foreign and domestic. A two-year period of relatively high cottonseed oil prices ended in 1937 with crude quoted at 5¾c at the year's close. Supplies for the year ending July 31, 1938 of around 2,500,000,000 lbs. are the largest on record.

Vegetable Oils

WEEKLY MARKET REVIEW

TRADE in cottonseed oil futures at New York broadened following the year-end holiday and prices rose modestly under new speculative absorption and covering by shorts. There were indications that cash trade was fairly good, considering the season, and firmness of crude oil in the South and better outside markets resulted in a somewhat stronger market for oil. Increased offerings were encountered on a scale upwards and this served to check advances.

There was buying in oil and other commodities at times on the possibility of inflation. The prospect of another large budget was regarded as a constructive factor because of the hope that cotton oil would benefit indirectly from spending for national defense.

The market's behavior was regarded as normal for the season. December oil consumption was estimated at from 325,000 to 365,000 bbls. against 352,000 bbls. in December, 1936. Shortening trade as well as cash oil demand held up well during closing months of 1937 and distribution started off in good volume during the first days of 1938.

Imports of edible oils will probably continue to be small and comparatively liberal consumption of domestic cottonoil is expected. The market was not overlooking the fact that cotton acreage will be smaller in 1938.

Fear Lard Competition

There was some fear of competition from pure lard. Lard stocks are increasing and the hog run has been liberal recently and may remain so for a while with prospects of heavy hog marketings during the summer.

There were reports at one time during the week that the government had bought 25 or 30 tanks of crude oil in the Valley at 5¾c. This was not confirmed, however, as no official reports are made of purchases. The trade estimates that to date the government has bought about 175 tanks of crude oil.

Other buyers came into the market at better prices as the FSCC demand for crude appeared and a stronger trend materialized. In Texas there were sales at 5⅞c with mills holding for 6c, while in the Southeast and Valley there were sales at 5⅞c and 6c in a limited way to smaller buyers. Mills in those sections also were generally holding for 6c or better.

COCOANUT OIL.—The market was barely steady at New York with sales reported at 4c, although generally sellers were asking 4⅛c. The tone was a little draggy on the Pacific Coast with indications that 3⅞c might be done there. Buying interest generally continued small.

CORN OIL.—The market was moderately active but steady at New York and corn oil was quoted at 6½@6⅝c.

SOYA BEAN OIL.—Demand continued limited at New York and the market was quoted around 5¾c asked. There was a possibility of shading on bids.

PALM OIL.—Demand was moderate following the holidays at New York and prices were barely steady. Nigre for shipment was quoted at 3½c and Sumatra oil at 3¾c.

PALM KERNEL OIL.—Demand was quiet and the market 4.80c nominal, New York.

OLIVE OIL, FOOTS.—Interest was routine at New York and the market was steady. Spot supplies were quoted at 8@8¼c and new crop for shipment at 7c.

PEANUT OIL.—Demand was reported rather small at New York. Nearby oil was quoted at 6½c and forward delivery at 6¼c.

COTTONSEED OIL.—Valley and Southeast crude was quoted on Wednesday at 6c paid; Texas 5⅞c bid at common points, Dallas 6c nom.

Market transactions at New York:

Friday, December 31, 1937

	Sales.	—Range— High.	Low.	— Closing — Bid.	Asked.
Jan.	5	704	704	703 a	708
Feb.	....	....	....	705 a	nom
Mar.	9	712	711	711 a	712
April	....	....	....	711 a	nom
May	11	715	713	714 a	trad
June	....	....	....	715 a	nom
July	19	718	716	717 a	trad
Aug.	....	....	....	717 a	nom

Saturday, January 1, 1938

HOLIDAY, No Market.

Monday, January 3, 1938

Jan.	3	707	706	700 a 710
Feb.	....	....	....	705 a nom
Mar.	11	714	710	710 a 711
April	....	....	....	710 a nom
May	19	717	711	713 a 715
June	....	....	....	715 a nom
July	30	720	716	716 a trad
Aug.	....	....	....	720 a nom

Tuesday, January 4, 1938

Jan.	22	711	706	708 a 712
Feb.	....	....	....	710 a nom
Mar.	10	723	714	723 a 22tr
April	....	....	....	723 a nom
May	52	725	718	724 a 725
June	....	....	....	725 a nom
July	43	727	721	727 a trad
Aug.	....	....	....	727 a nom

Wednesday, January 5, 1938

Jan.	11	715	715	710 a 718
Feb.	....	....	....	715 a nom
Mar.	31	728	723	723 a trad
April	....	....	....	723 a nom
May	94	730	725	725 a 726
June	.....	....	....	725 a nom
July	68	732	727	728 a trad
Aug.	....	....	....	730 a nom

Thursday, January 6, 1938

Jan.	....	....	....	722 a 725
Mar.	....	....	....	731 a 733
May	....	....	....	735 a nom
July	....	....	....	737 a nom

(See page 49 for later markets.)

SOUTHERN MARKETS

New Orleans.

(Special Wire to The National Provisioner.)

New Orleans, La., January 5, 1938.—Cotton oil futures are about ten points higher than a week ago. Crude is offered more freely at 6c, with numerous buyers at 5⅞@6c. Bleachable is firm and in better demand. If December consumption report is disappointing crude may decline moderately for brief period, but for a long pull the price tendency is upward.

Dallas.

(Special Wire to The National Provisioner.)

Dallas, Texas, January 5, 1938.—Forty-three per cent cottonseed cake and meal, Dallas basis, for interstate shipment, $23.00. Prime cottonseed oil 5⅞@6c.

MARGARINE TAXES OPPOSED

Ninety-five of 127 professors of public finance opposed taxes on margarine in answering a questionnaire recently set out by Mark Graves, New York state commissioner of taxes. Of the experts questioned, 95 opposed special margarine taxes; 24 favored them and eight were noncommittal. In another study by the Tax Policy League of New York City, 41 experts on public finance were against special taxes on margarine; five were in favor of such levies and six were noncommittal.

NOV. MARGARINE PRODUCTION

Margarine produced during November, 1937, with comparisons showing an increase of 9.5 per cent over the production of November, 1936, is reported as follows by margarine manufacturers:

	Nov., 1937. lbs.	Nov., 1936. lbs.
Production of uncolored margarine	37,361,016	34,031,206
Production of colored margarine	113,887	178,101
Total production	37,474,903	34,209,307
Uncolored margarine withdrawn tax paid	38,007,265	33,730,745
Colored margarine withdrawn tax paid	61,354	65,794

Hides and Skins

WEEKLY MARKET REVIEW

Chicago

PACKER HIDES.—Trading in the packer market has been very quiet during most of the week but late this week three packers sold a total of 6,100 Nov.-Dec. heavy native cows at 11½c, steady price. Buying interest had been lacking earlier, due in part to the erratic fluctuation of prices on the hide futures market in sympathy with other commodity and security markets, but the futures have now firmed up 31@39 points over last Thursday and more interest seems to be developing in the spot hide market.

Hides have been available at last trading prices for cow descriptions, with the probability that steers would also be moved at unchanged levels, although packers show a lack of concern regarding their comparatively light holdings of steers. Small stock, such as calf and kipskins and slunks, moved at higher prices this week in a fair way, with 1½c advance paid on calfskins and ½c up for kips. The strengthening of calfskins may have the effect of making light cows look comparatively cheap to tanners who can substitute some of these and more interest is expected to result.

Last trading on native steers was at 14½c, extreme light native steers 11¾c, butt branded and heavy Texas steers 14c, Colorados 13½c, light Texas steers held at 13c, and extreme light Texas steers last sold at 10½c, mostly Oct.-Nov. take-off.

Heavy native cows moved this week at 11½c, steady. Light native cows last sold at 11c, and branded cows 10½c, Oct.-Nov. take-off. Native bulls last sold at 10c and branded at 9c, with ½c more asked.

Interest was centered this week in the Shoe Fair held in Chicago this week and, while a record attendance was present, reports vary considerably as to the volume of orders booked, although a fair business was generally reported. Buyers have been holding off in view of uncertain business conditions and Easter is late this year, but shoe production will have to be stepped up within the next few weeks.

Shoe production in November was 21,040,906 pairs, compared with 28,950,814 in Oct., and 30,342,839 in Nov. of 1936. However, production for the eleven months was 389,245,868 pairs, against 381,846,748 in same period of 1936, still showing 1.9% increase.

The transfer of 19,976 old drought hides, mostly light cows and branded cows stored at Chicago and Indianapolis, to the State of Oklahoma for use in state owned tannery reduced the Government holdings to 121,041 drought hides.

LATER: One packer sold 2,300 Nov.-Dec. heavy native cows at 11½c, steady.

OUTSIDE SMALL PACKER HIDES.—Some offerings of Nov.-Dec. outside small packer all-weights are available late this week basis 10c for natives and ½c less for brands, selected, del'd Chicago, and unsold; although there is no apparent pressure on offerings, buyers' ideas have topped at 9½c recently and buying interest light, but any further firming up of futures market and resumption of trading in packer light cows would probably be quickly reflected here.

PACIFIC COAST.—Most Coast packers are sold up to end of Oct., with last sales two weeks back at 12c for steers and 9c for cows, flat, f.o.b. shipping points. Nov.-Dec. hides understood to be available this basis but interest has been quiet.

FOREIGN WET SALTED HIDES.—South American market has been very quiet but accumulation moderate, as this market had been fairly closely sold up until about ten days back, with last sale of a full pack of standard steers at 85 pesos, equal to 14c, c.i.f. New York. One small lot of 2,000 LaPlatas was reported early this week at 88¾ pesos or 14.60, about 14⅝c. Seasonal quality has, of course, improved.

COUNTRY HIDES.—There appears to be a little more interest in country hides late this week but actual sales are awaited to define prices. Untrimmed all-weights, 47-48 lb. avge., held at 8¼c, some asking up to 8½c, selected, del'd Chicago, and offerings not very liberal, although buyers' ideas usually not over 8c. Heavy steers and cows quoted 8¼@8½c, trimmed, with buyers' ideas 8c. Trimmed buff weights quoted 8½@8¾c, with last reported sale at 8¼c. Good trimmed extremes are salable at 9½c and this figure reported paid, but 9¾c usually asked; higher will undoubtedly be asked if packer light cows should sell steady. Bulls and glues quoted around 6½c flat. All-weight branded hides quoted 7¼@7½c, flat, with 7¼c last paid.

CALFSKINS.—Packer Dec. calfskins moved up 1½c late this week when one killer sold Dec. production of about 10,000 basis 17½c for northern heavies 9½/15 lb., 16½c for River point heavies, and 15½c for lights under 9½ lb. This was only ½c from packers' original asking prices. Another killer sold 3,500 Dec. lights at 15½c; further trading pending. Earlier, one packer had sold 16,000 Milwaukee Nov.-Dec. all-weights at 16c for packers, and 3,000 cities at 15c, or 1@2c up; another packer sold 3,600 Milwaukee all-weights same basis.

LATER: Another packer sold 10,000 Dec. light calf at 15½c and 13,000 northern heavies at 17½c, including Detroit, Cleve. and Evansville at 18c for heavies, usual premium, lights 15½c. Another sold 13,000 Dec. light calf 15½c and booked 3,000 more; also 13,000 Dec. northern heavy calf 17½c.

One collector late this week announced the sale of 5,000 city 8/10 lb. calf at close of last week at 13½c, although 14c was generally asked this week; the 10/15 lb. are offered at 15c, steady price, and unsold. Outside cities, 8/15 lb., quoted around 13@13½c; straight countries about 11c flat. Three collectors each sold a car Chicago city light calf and deacons at 90c, as against 70c paid five weeks back; another car reported to have sold same basis.

KIPSKINS.—Packer Dec. kipskins started moving this week at ½c advance. Northern natives are held at 13½c; one packer sold 7,000 and another 5,000 Dec. southern natives at 12½c. The two packers sold total of 4,200 Dec. northern over-weights at 12½c, and 9,500 southerns at 11½c. Branded kips, including about 4,000 Nov., are firmly held at 11c.

Chicago city kipskins have been offered at 12½c without attracting bids; some quote 12c nom. Outside cities 11½@12c nom.; straight countries 10c to possibly 10½c flat.

Two packers sold a total of 10,000 Dec. regular slunks at 77½c, or 2½c over last week.

HORSEHIDES.—Buying interest slow and larger buyers inactive. As a result, quotations vary considerably, with hardly sufficient business to establish prices. Some quote choice city renderers, with full manes and tails, $3.00@3.25, selected, f.o.b. shipping points, others quoting down to $2.85@3.15; ordinary trimmed renderers quoted $2.75@3.00, some quoting $2.90 top, del'd Chgo.; mixed city and country lots $2.25@2.35.

SHEEPSKINS.—Dry pelts around 11½@12c per lb., del'd Chgo. One big packer sold a car shearlings this week at 75c for No. 1's, 60c for No. 2's and 50c for No. 3's; accumulation very slow and trading correspondingly light. Pickled skins quiet, with $4.75 last paid for a car Dec. skins, and a few small lots Dec. sold at $4.50; quality still declining, with skins ribby and cockly, and some feel $4.50 is full market for present quality, although others talk up to $5.00 per doz. Wool pelts firmer, due to the firmer undertone to the wool market; outside packer pelts generally quoted around $1.50 per cwt. live lamb, although some are reported to have sold at $1.50 and $1.57½ per cwt. live lamb recently, for better quality stock.

New York

PACKER HIDES.—One New York packer late this week moved about 15,000 branded steers, with take-off dating June into Oct. going at 14½c for butt branded steers and 14c for Colorados, while May and also Nov.-Dec. brands sold at ½c less. One lot of 1,600 April butt brands sold late last week at 14c. The other three packers are about sold up to end of Nov., and further trading will probably develop later.

CALFSKINS.—The New York calfskin market was firm and offerings not burdensome. Collectors' 4-5's quoted around $1.00 nom., 5-7's at $1.25 last

paid, 7-9's at $1.60@1.65 last paid, 9-12's $2.45 last paid with 9-12 buttermilks at $1.90; 12/17 lb. kips $2.60 nom., 17 lb. up $3.00 nom. Packer 4-5's around $1.20 nom., 5-7's $1.50@1.55 nom., 7-9's $1.80 last paid, 9-12's $2.70 last paid, 12/17 kips $2.75 nom., and 17 lb. up $3.10 last paid.

N. Y. HIDE FUTURE MARKETS

Friday, Dec. 31, 1937—Close: Mar. 9.96 sale; June 10.30@10.34; Sept. 10.61 n; Dec. 10.92 n; sales 111 lots. Closing 23@29 lower.

Monday, Jan. 3, 1938—Close: Mar. 9.98 sale; June 10.30@10.31 sales; Sept. 10.68 sale; Dec. 10.98 n; sales 85 lots. Closing unchanged to 7 higher.

Tuesday, Jan. 4, 1938—Close: Mar. 10.38@10.40 sales; June 10.72@10.75 sales; Sept. 11.10 n.; Dec. 11.40 n; sales 90 lots. Closing 40@42 higher.

Wednesday, Jan. 5, 1938—Close: Mar. 10.20@10.26; June 10.58@10.59; Sept. 10.91@10.95; Dec. 11.21 n; sales 145 lots. Closing 14@19 lower.

Thursday, Jan. 6, 1938—Close: Mar. 10.58 sale; June 10.90 sale; Sept. 11.24 nom., Dec. 11.54 nom.; sales 123 lots. Closing 32@38 higher.

Friday, January 7, 1938—Close: Mar. 10.46 nom.; June 10.80@10.83; Sept. 11.15@11.17; Dec. (1938) 11.45 nom.; sales 65 lots. Closing 9 to 12 lower.

CHICAGO HIDE QUOTATIONS

Quotations on hides at Chicago for the week ended Jan. 7, 1938, with comparisons:

PACKER HIDES.

	Week ended Jan. 7.	Prev. week.	Cor. week, 1937.
Spr. nat. strs.	@15n	@15n	@16½n
Hvy. nat. strs.	@14½	@14½	@16b
Hvy. Tex. strs.	@14	@14	@16b
Hvy. butt brnd'd strs.	@14	@14	@16b
Hvy. Col. strs.	@13½	@13½	@15½b
Ex-light Tex. strs.	@10½	@10½	13¾ @14¼
Brnd'd cows..	@10½	@10½	13¾ @14¼
Hvy. nat. cows	@11¼	@11¼	@14b
Lt. nat. cows.	@11	@11	14 @14¼
Nat. bulls 10	@10½	10 @10½	@11¾
Brnd'd bulls.. 9	@ 9½	9 @ 9½	@10¾
Calfskins .....15½@17½		14 @16	24 @27
Kips, nat.	@13½n	@13	@17½
Kips, ov-wt....	@12½	@12	@16
Kips, brnd'd..	@11ax	@10½	@14
Slunks, reg. ..	@77½	@75	1.25@1.40
Slunks, hrls...35	@40	35 @40	55 @60

Light native, butt branded and Colorado steers 1c per lb. less than heavies.

CITY AND OUTSIDE SMALL PACKERS.

Nat. all-wts.. 9½@10	9¼@10	13¼ @13¾
Branded 9	@ 9½	9 @ 9½	12¾ @13¼
Nat. bulls ... 7½@ 8	8 @ 8½	@10½
Brnd'd bulls.. 6½@ 7	7 @ 7½	@ 9½
Calfskins .... 13½@15	13½@15	22 @24
Kips 12	@12½	12 @12¼	15½ @16
Slunks, reg...70	@75n	65 @70n	1.10@1.15n
Slunks, hrls..30	@35n	30 @35n	40 @50n

COUNTRY HIDES.

Hvy. steers .. 8¼@ 8½	8¼@ 8¾	10½@10¾
Hvy. cows ... 8¼@ 8½	8½@ 8¾	10½@10¾
Buffs ..... 8¼@ 8¾	8½@ 9	12 @12¼
Extremes .... 9½@ 9¾	9¼@10	13 @13½
Bulls ..... @ 6½	6¼@ 6¾	@ 9
Calfskins .... @11	10 @10½	@17
Kips 10	@10½	9½@10	13 @13½
Light calf ...65	@75n	60 @70n	1.10@1.25
Deacons 65	@75n	60 @70n	1.10@1.25
Slunks, reg...45	@60n	40 @55n	80 @90n
Slunks, hrls..10	@20n	10 @20n	15 @25n
Horsehides ...2.25@3.25		2.25@3.40	4.75@5.50

SHEEPSKINS

Pkr. lambs	.....	.....
Sml. pkr. lambs	.....	.....	2.30@2.40
Pkr. shearlgs.	@75	65 @75	1.35@1.50
Dry pelts ....11½@12	11 @12n	22 @23

Week's Closing Markets

FRIDAY'S CLOSINGS

Provisions

Hog products were steadier during the latter part of the week on commission house buying, inflationary fears, and stronger commodities generally. Less liquidation in January lard offset liberal hog receipts. Hogs were stronger with top at Chicago at $8.60.

Cottonseed Oil

Cotton oil was active and stronger on better crude markets, higher allied markets, inflation buying and covering, but active hedge selling made for orderly upturn. It was estimated 150 tanks crude oil sold at 6c across the Belt; now 6c bid everywhere with all buyers interested. Cash trade was fairly good. Government official announced intention today to keep next cotton crop down to 10,500,000 bales, which was construed bullishly.

Quotations on bleachable cottonseed oil at close of market on Friday were: Jan. 7.27@7.35; March 7.38; May 7.39; July 7.43. Sales 205 lots. Closing firm.

Tallow

Tallow, extra 5⅞c lb. f.o.b.

Stearine

Stearine, 7¼@7½c, plants.

Friday's Lard Markets

New York, January 7, 1938.—Prices are for export. Lard, prime Western, 8.95@9.05c; middle Western, 8.95@9.05c; city, 8½@8⅝c; refined Continent, 9¼@9⅜c; South American, 9⅜@9½c; Brazil kegs, 9½@9⅝c; compound, 9¾c in carlots.

LARD AND GREASE EXPORTS

Exports of lard from New York City, week of December 31, 1937, totaled 1,510,832 lbs.; greases 330,400 lbs.; stearine none; tallow none.

MEAT AND LARD EXPORTS

Exports of bacon and lard through port of New York during week ended January 6, 1938 totaled 2,499,822 lbs. of lard and 265,530 lbs. of bacon.

ARGENTINE BEEF EXPORTS

Cable reports of Argentine exports of beef this week up to January 7, 1938: To the United Kingdom, 72,632 quarters; to the Continent, 31,003.

BRITISH PROVISION MARKETS

(Special Cable to The National Provisioner.)

Liverpool, January 6, 1938.—General provision market quiet; slow demand for lard; hams continue dull.

Friday's prices were: Hams, American cut, 82s; ham, long cut, exhausted; Liverpool shoulders, square, unquoted; picnics, unquoted; short backs, unquoted; bellies, English, 80s; Wiltshires unquoted; Cumberlands, 69s; Canadian Wiltshires, 84s; Canadian Cumberlands, 81s; spot lard, 50s 6d.

LIVERPOOL PROVISION PRICES

Prices of first quality product at Liverpool for the week of December 22:

	Dec. 22, 1937.	Dec. 15, 1937.	Dec. 23, 1936.
American green bellies..	Nominal	Nominal	$18.20
Danish Wiltshire sides..	$21.98	$21.64	20.17
Canadian green sides....	19.63	19.63	17.87
American short cut green hams	18.85	18.85	20.50
American refined lard...	11.43	11.64	15.31

LIVERPOOL PROVISION STOCKS

Provision stocks on hand January 1, 1938 as estimated by Liverpool Trade Association:

	Jan. 1, 1938.	Dec. 1, 1937.	Jan. 1, 1937.
Bacon, lbs.	77,840	55,776	152,896
Ham, lbs.	851,344	870,128	465,696
Shoulders, lbs.	560	672	13,552
Butter, cwt.*	6,611	3,070	4,527
Cheese, cwt.*	23,306	25,987	16,424
Lard, steam (U. S.) tons.	31	73	14
Lard, steam (Canada) tons	3	12	17
Lard, steam (Argentina) tons	83	95	22
Lard, refined (U. S.) tons	558	401	411
Lard, refined (Canada) tons	50	27	42
Lard, refined (Can. & So. Amer.) tons.....	9	21	10

*(Ton of 2,240 lbs.; cwt., 112 lbs.)

CHICAGO HIDE MOVEMENT

Receipts of hides at Chicago for the week ended Dec. 31, 1937, were 4,503,000 lbs.; previous week 4,078,000 lbs.; same week last year, 4,479,000 lbs.; from January 1 to Dec. 31 this year, 238,236,000 lbs.; same period a year ago, 225,536,000.

Shipments of hides from Chicago for the week ended Dec. 31, 1937, were 3,082,000 lbs.; previous week, 3,966,000 lbs.; same week last year, 3,743,000 lbs.; from January 1 to Dec. 31 this year, 248,362,000 lbs.; same period a year ago, 226,048,000.

HULL OIL MARKETS

Hull, England, January 5, 1938.—Refined oil, 22s 6d. Egyptian crude cottonseed oil, 19s 6d.

Live Stock Markets
WEEKLY REVIEW

LIVESTOCK *Costs*

•

Packers Paid More in 1937 Than for Seven Years

•

PACKERS operating under federal inspection in the United States paid over $1,600,000,000 for meat animals in 1937, probably the highest total price paid in 7 years. This is an increase of 90 per cent from the amount paid in the low period of 1932 and 1933.

Wide price fluctuations featured the live markets during the year. Extreme shortage in the middle of the year forced top prices on the Chicago market to some of the highest records outside of the world war days. Range in price of beef steers was from a low of $5.75 to a high of $19.90—highest price since 1919, when the $21.50 record was made. Hog top was $13.75, highest since 1926, and the lamb top at $13.35 was highest in seven years.

Average annual prices at Chicago for cattle, calves, hogs and sheep during the past 10 years have been compiled by the "Chicago Daily Drovers Journal" as follows:

	Beef Cattle.	Calves.	Hogs.	Sheep.
1937	$11.65	$9.35	$10.05	$10.75
1936	8.85	8.35	9.85	9.65
1935	10.35	8.20	9.25	8.65
1934	6.75	5.70	4.75	7.70
1933	5.45	5.50	4.00	6.40
1932	6.75	5.70	3.85	5.80
1931	8.10	7.75	6.20	7.00
1930	11.05	10.90	9.50	9.35
1929	13.40	14.40	10.20	14.30
1928	14.05	13.80	9.30	14.60
1927	11.70	12.45	10.05	13.90
1926	9.70	11.95	12.40	13.90
1925	10.55	11.05	11.80	15.50

Peak prices for cattle were paid at Chicago in September and October. Highest hog prices were paid in August and for lambs in March and April.

Average price of steers at Chicago for the year was $11.65, which compares with $8.85 in 1936; hogs, $10.05 average against $9.85 in 1936; and lambs $10.75 average in 1937, which was $1.10 higher than the 1936 average.

DECEMBER STEER RUN

During December, 1937, there was marketed at the Chicago Stock yards 69,934 head of steers compared with 84,954 in December, 1936. Average weight of these steers was 1053 lbs.; a year ago it was 1078 lbs. Of the total marketed only 8.4 per cent graded choice and prime; 42.3 per cent graded good; 36.7 per cent medium and 12.6 per cent common. A year ago choice and prime steers constituted 38.9 per cent of the receipts; good, 24.9 per cent; medium, 23.9 per cent; common, 12.3 per cent. Average price in December, 1937, was below that of a year earlier. Choice and prime steers averaged $12.30 per cwt., a year ago $11.82, while good steers averaged $9.69 and a year ago $10.38.

LIVE HOGS IMPORTED

Hogs imported into the United States for slaughter during November totaled only 582 head. This compares with 3,343 head in October and 11,516 head in November a year ago. For the first 11 months of 1937 imports of 86,365 head were 18,306 more than were received in the 11 months of 1936. Figures for November and the same month a year ago and for the 11 months of each year are reported as follows:

	1937. Number.	1936. Number.
November	582	11,516
October	3,343	8,767
11 months	86,365	68,059

1937 SLAUGHTER RECORDS

Cattle, calf and lamb slaughter under federal inspection in the United States in 1937 was well above the 5-year-average, while hog slaughter was only about one-third of that average. Slaughter for each of the past 3 years, and the 5-year-average, are as follows:

	1937.*	1936.	1935.	5-yr.-av.
Cattle	10,000,000	10,972,000	9,666,000	8,176,000
Calves	6,250,000	6,070,000	5,679,000	4,640,000
Sheep and lambs	17,250,000	17,216,000	17,644,000	16,809,000
Hogs	31,400,000	36,055,000	26,057,000	45,991,000

*Estimated.

Calf slaughter under federal inspection made a record in 1937 and cattle slaughter a near record. Cattle kill during the year was 22 per cent over the 5-year-average, calf slaughter 35 per cent over, sheep and lamb kill 3 per cent over. Hog kill was 32 per cent under the 5-year-average.

ST. LOUIS IN SECOND PLACE

National Stock Yards at E. St. Louis, Ill., jumped from fourth to second place in livestock marketing during 1937, according to figures released by H. A. Powell, secretary of the St. Louis Live Stock Exchange. Total livestock receipts during 1937 totaled 4,949,141, as compared to 4,727,410 in 1936.

The St. Louis National Stock Yards broke two of its own records during the past year. This was due to the educational campaign carried on by marketing interests and to six breeding ewe auctions. Calf receipts in 1937 were 634,765, compared to 568,785 in 1936; Cattle receipts in 1937 totaled 952,704 head, as compared to 913,800 head in 1936. Hog receipts in 1937 were 2,259,-487, as compared to 2,474,228 in 1936, the decline being attributed to the drouth from 1934 to 1936, during which hog raisers liquidated their stock as a result of high feed prices.

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CORN BELT DIRECT TRADING

(Reported by U. S. Bureau of Agricultural Economics.)

Des Moines, Ia., January 6, 1938. At 20 concentration points and 10 packing plants in Iowa and Minnesota, receipts through Thursday of the current week were slightly heavier than in same period last week and year ago. Undertone in direct trade was fairly active during the week. Heavy receipts Thursday and uneven downturn left prices of butcher hogs unevenly 5@15c, mostly 10@15c lower than last Saturday; packing sows mostly 15@25c off. Current prices good to choice 170 to 220 lb. hogs, $7.60@7.80, mostly $7.65@7.75 at plants, very few strictly choice to $7.85; 220 to 250 lb., $7.45@7.60; 250 to 290 lb., $7.00@7.45; 290 to 350 lb., $6.65@7.00. Good and choice 160 to 180 lb., $7.50@7.75. Good sows 350 lb. down $6.20@6.35, most 350 to 500 lb. averages, $5.90@6.25.

Receipts for the week ended Thursday, January 6, 1938, are reported as follows:

	This week.	Last week.
Friday, Dec. 31	33,000	58,200
Saturday, Jan. 1	Holiday	Holiday
Monday, Jan. 3	37,000	48,500
Tuesday, Jan. 4	23,900	22,600
Wednesday, Jan. 5	24,600	16,700
Thursday, Jan. 6	50,200	43,800

CANADIAN LIVESTOCK PRICES

BUTCHER STEERS.
Up to 1,050 lbs.

Top Prices	Week ended Dec. 30.	Last week.	Same week 1936.
Toronto	$ 7.25	$ 8.00	$ 6.40
Montreal	7.00	6.50	6.00
Winnipeg	6.00	6.50	6.00
Calgary	4.00	5.00	5.50
Edmonton	6.00	5.50	6.00
Prince Albert	....	4.00	3.25
Moose Jaw	5.00	5.50	4.00
Saskatoon	5.00	5.25	3.00

VEAL CALVES.

Toronto	$10.50	$10.50	$11.00
Montreal	10.00	10.00	10.00
Winnipeg	9.00	9.00	8.00
Calgary	5.50	5.50	6.00
Edmonton	7.00	7.00	5.50
Prince Albert	....	4.50	5.00
Moose Jaw	5.50	6.00	5.50
Saskatoon	7.25	7.50	6.00

BACON HOGS.

Toronto	$ 8.65	$ 8.40	$ 8.90
Montreal (1)	9.00	8.75	8.90
Winnipeg (1)	8.25	8.00	7.60
Calgary	7.75	7.75	7.25
Edmonton	8.00	7.75	7.25
Prince Albert	8.00	7.75	7.35
Moose Jaw	8.10	7.85	7.35
Saskatoon	8.00	7.75	7.35

(1) Montreal and Winnipeg hogs sold on a "fed and watered" basis. All others "off trucks."

GOOD LAMBS.

Toronto	$ 8.50	$ 9.00	$ 9.25
Montreal	8.00	8.00	8.00
Winnipeg	6.75	6.75	7.50
Calgary	5.50	6.25	6.50
Edmonton	6.25	6.25	6.75
Prince Albert	....	5.50	6.50
Moose Jaw	6.00	6.00	7.00
Saskatoon	....	6.25	6.00

NEW YORK LIVESTOCK

Receipts week ended January 1, 1938:

	Cattle.	Calves.	Hogs.	Sheep.
Jersey City	3,248	6,869	5,207	20,562
Central Union	1,859	1,305	.....	6,493
New York	97	1,333	17,588	7,455
Total	5,204	9,507	22,795	34,510
Last week	4,799	14,275	26,350	37,757
Two weeks ago	7,295	11,048	29,749	58,470

LIVESTOCK PRICES AT LEADING MARKETS

Livestock prices at five leading Western markets, Thursday, January 6, 1938, as reported by the U. S. Bureau of Agricultural Economics:

Hogs (Soft or oily hogs, excluded).	CHICAGO.	E. ST. LOUIS.	OMAHA.	KANS. CITY.	ST. PAUL.
Lt. wt., 140-160 lbs.,					
Good-choice	$ 8.35@ 8.60	$ 8.35@ 8.50	$ 7.75@ 8.00	$ 7.65@ 7.90	$ 8.00@ 8.05
Medium	7.90@ 8.35	7.85@ 8.35	.....	7.40@ 7.70	8.00@ 8.05
Lt. wt., 160-180 lbs.,					
Good-choice	8.35@ 8.60	8.25@ 8.50	7.90@ 8.00	7.70@ 7.90	8.00@ 8.05
Medium	7.85@ 8.30	7.75@ 8.35	.....	7.50@ 7.75	7.70@ 8.00
Lt. wt., 180-200 lbs.,					
Good-choice	8.30@ 8.60	8.20@ 8.40	7.85@ 8.00	7.75@ 7.90	7.40@ 7.70
Medium	7.80@ 8.25	7.65@ 8.25	.....	7.55@ 7.75	6.85@ 7.40
Med. wt.,					
200-220 lbs., gd-ch	8.25@ 8.60	7.90@ 8.30	7.75@ 8.00	7.65@ 7.85	6.50@ 6.85
220-250 lbs., gd-ch	7.70@ 8.50	7.50@ 8.10	7.50@ 7.90	7.40@ 7.75	.....
Hvy. wt.,					
250-290 lbs., gd-ch	7.50@ 8.00	7.00@ 7.70	7.20@ 7.75	7.00@ 7.60	.....
290-350 lbs., gd-ch	7.15@ 7.75	6.75@ 7.10	6.75@ 7.30	6.85@ 7.20	.....
PACKING SOWS:					
275-350 lbs., good	6.75@ 6.90	6.40@ 6.65	6.35@ 6.50	6.35@ 6.60	6.20@ 6.35
350-425 lbs., good	6.60@ 6.75	6.25@ 6.50	6.35@ 6.40	6.25@ 6.50	6.10@ 6.20
425-550 lbs., good	6.25@ 6.60	6.15@ 6.40	6.25@ 6.35	6.15@ 6.35	6.10@ 6.20
275-550 lbs., medium	6.10@ 6.75	5.85@ 6.40	.....	5.85@ 6.35	.....
SLAUGHTER PIGS, 100-140 lbs.:					
Good-choice	7.85@ 8.60	7.75@ 8.50	.....	7.50@ 8.00	8.00@ 8.25
Medium	7.50@ 8.35	7.25@ 8.35	.....	7.25@ 7.75	.....
Slaughter Cattle, Calves and Vealers:					
STEERS, 750-900 lbs.,					
Choice	9.00@10.25	8.00@10.25	.....	.....	8.50@ 9.50
Good	7.50@ 9.50	7.25@ 9.00	7.25@ 9.00	7.25@ 9.00	7.15@ 8.75
Medium	6.50@ 7.75	6.50@ 7.50	6.00@ 7.50	5.75@ 7.25	6.15@ 7.60
Common (plain)	5.50@ 6.75	5.75@ 6.75	5.00@ 6.25	5.25@ 6.25	5.15@ 6.50
STEERS, 900-1100 lbs.,					
Prime	.....	.....	.....	.....	.....
Choice	9.50@11.25	8.75@11.25	9.00@10.75	9.00@10.25	8.75@ 9.75
Good	7.75@10.25	7.50@ 9.00	7.50@ 9.25	7.25@ 9.00	7.25@ 9.00
Medium	6.75@ 8.50	6.75@ 7.75	6.25@ 7.75	6.25@ 7.25	.....
Common (plain)	5.75@ 7.00	6.00@ 7.00	5.25@ 6.75	5.50@ 6.50	5.15@ 6.50
STEERS, 1100-1300 lbs.,					
Prime	.....	.....	.....	.....	.....
Choice	10.25@12.25	9.00@11.75	9.25@11.25	.....	9.00@10.75
Good	8.50@10.75	7.75@ 9.25	7.75@ 9.50	7.25@ 9.25	7.60@ 9.50
Medium	7.00@ 8.50	7.00@ 8.00	6.75@ 8.00	6.50@ 7.75	6.50@ 7.85
STEERS, 1300-1500 lbs.,					
Prime	.....	.....	.....	.....	.....
Choice	10.75@12.25	9.25@12.00	.....	.....	9.50@11.00
Good	8.50@11.00	8.00@ 9.25	8.00@10.00	7.75@ 9.50	7.85@ 9.50
HEIFERS, 550-750 lbs.,					
Choice	7.75@ 9.50	8.00@ 9.50	7.50@ 8.50	7.50@ 8.75	7.75@ 9.00
Good	7.00@ 8.00	7.00@ 8.00	6.25@ 7.50	6.50@ 7.50	6.75@ 8.00
Common (plain), medium	5.50@ 7.00	5.25@ 7.00	5.00@ 6.25	4.75@ 6.50	4.75@ 5.75
HEIFERS, 750-900 lbs.,					
Good-choice	7.00@ 9.50	.....	6.25@ 9.00	6.50@ 8.75	7.75@ 8.75
Common (plain), medium	5.75@ 7.00	.....	5.00@ 6.25	4.75@ 5.75	4.75@ 5.75
COWS:					
Choice	7.00@ 7.50	.....	.....	.....	.....
Good	6.25@ 7.00	5.75@ 7.00	5.50@ 6.75	5.75@ 6.50	5.50@ 6.25
Common (plain), medium	5.25@ 6.25	5.00@ 5.75	4.75@ 5.50	4.65@ 5.75	4.75@ 5.25
Low cutter-cutter	4.00@ 5.25	3.50@ 5.00	3.75@ 4.75	3.50@ 4.75	3.50@ 4.75
BULLS (Yearlings excluded):					
Good (beef)	6.25@ 7.25	6.75@ 7.25	6.25@ 7.00	6.50@ 7.00	6.25@ 6.75
Cutter, com. (plain), med	5.25@ 7.00	4.75@ 6.75	4.50@ 6.50	4.50@ 6.50	4.50@ 5.75
VEALERS:					
Good-choice	9.50@11.75	9.75@11.00	8.00@10.00	7.50@10.50	9.50@10.50
Medium	7.50@ 9.50	8.50@ 9.75	6.50@ 8.00	6.00@ 7.50	6.50@ 8.00
Cull-common (plain)	5.50@ 7.50	4.50@ 8.50	4.00@ 6.50	4.50@ 6.00	4.00@ 6.50
CALVES, 250-500 lbs.,					
Good-choice	6.50@ 9.00	7.00@ 8.75	6.00@ 8.00	6.50@ 8.50	7.50@ 8.50
Common (plain), medium	4.50@ 6.50	4.50@ 7.00	4.00@ 6.00	4.50@ 6.50	4.50@ 5.50
Slaughter Lambs and Sheep:					
LAMBS:					
Choice	8.25@ 8.75	8.25@ 8.50	7.75@ 8.00	7.85@ 8.25	8.00@ 8.65
Good	7.50@ 8.25	7.50@ 8.25	7.25@ 7.75	7.25@ 7.85	7.50@ 8.00
Medium	6.50@ 7.50	6.50@ 7.50	6.25@ 7.25	6.50@ 7.25	6.50@ 7.50
Common (plain)	5.85@ 6.50	5.50@ 6.50	5.25@ 6.25	5.50@ 6.50	5.25@ 4.00
EWES:					
Good-choice	3.00@ 3.85	3.00@ 3.75	2.75@ 3.50	2.50@ 3.25	1.75@ 3.25
Medium to common	2.25@ 3.00	2.00@ 3.00	1.75@ 2.75	1.50@ 2.50	.....

CHICAGO PACKER PURCHASES

Purchases of livestock at Chicago by principal packers for the first four days of this week totaled 24,494 cattle, 5,493 calves, 65,918 hogs and 35,745 sheep.

CANADIAN INSPECTED KILL

	Nov., 1937.	11 mos., 1937.	11 mos., 1936.
Cattle	100,561	858,160	841,895
Calves	45,724	673,407	568,796
Hogs	388,973	3,426,895	3,150,223
Sheep	120,253	760,499	778,257

PACKERS' PURCHASES

Purchases of livestock by packers at principal centers for the week ending Saturday, January 1, 1938, as reported to The National Provisioner:

CHICAGO.

	Cattle.	Hogs.	Sheep.
Armour and Co.	6,328	2,889	11,059
Swift & Co.	2,888	5,330	9,903
Morris & Co.	2,267	.....	.....
Wilson & Co.	4,465	2,889	7,124
Shippers	10,208	18,228	11,206
Others	8,749	18,707	7,195

Brennan Packing Co., 2,077 hogs; Western Packing Co., Inc., 3,062 hogs; Agar Packing Co., 5,538 hogs.

Total: 34,151 cattle; 4,883 calves; 58,720 hogs; 46,487 sheep.

Not including 135 cattle, 139 calves, 18,734 hogs and 353 sheep bought direct.

KANSAS CITY.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Co.	2,953	719	465	3,226
Cudahy Pkg. Co.	1,626	611	747	3,454
Swift & Co.	1,925	458	990	2,965
Wilson & Co.	1,802	405	836	1,874
Indep. Pkg. Co.	.....	.....	218	.....
Meyer Kornblum	1,236	.....	.....	.....
Others	4,130	339	2,342	2,394
Total	13,732	2,532	5,598	13,913

Not including 22,326 hogs bought direct.

OMAHA.

	Cattle and Calves.	Hogs.	Sheep.
Armour and Co.	2,644	4,285	2,806
Cudahy Pkg. Co.	3,751	3,258	4,796
Dold Pkg. Co.	524	3,319	.....
Morris & Co.	1,498	28	1,192
Swift & Co.	3,875	2,959	5,224
Others	.....	11,892	5,899

Cattle and calves: Eagle Pkg. Co., 14; Greater Omaha Pkg., 68; Geo. Hoffman, 19; Lewis Pkg. Co., 677; Omaha Pkg. Co., 148; John Roth & Son, 111; South Omaha Pkg., 94; Nebraska Beef Co., 206; Hormel Pkg. Co., 52; Lincoln Pkg. Co., 247; Wilson & Co., 256.

Total: 14,184 cattle and calves; 25,741 hogs; 19,917 sheep.

Not including 5,181 hogs and 477 sheep bought direct.

EAST ST. LOUIS.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Co.	1,574	333	2,812	3,545
Swift & Co.	2,347	606	2,441	5,111
Morris & Co.	825	119	.....	.....
Hunter Pkg. Co.	1,448	396	3,013	335
Heil Pkg. Co.	.....	.....	1,507	.....
Krey Pkg. Co.	.....	.....	3,112	.....
Laclede Pkg. Co.	.....	.....	1,327	.....
Shippers	2,118	2,449	13,594	365
Others	3,120	132	1,279	723
Total	11,427	4,035	29,085	10,079

Not including 880 cattle, 1,722 calves, 27,215 hogs and 772 sheep bought direct.

ST. JOSEPH.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Co.	2,317	294	3,801	2,961
Swift and Co.	2,012	233	5,548	8,490
Others	1,040	1	1,750	231
Total	5,369	528	11,099	11,682

Not including 24 cattle and 657 hogs bought direct.

SIOUX CITY.

	Cattle.	Calves.	Hogs.	Sheep.
Cudahy Pkg. Co.	2,357	146	6,587	3,788
Armour and Co.	2,378	100	6,553	1,892
Swift & Co.	2,148	124	4,056	3,658
Shippers	2,368	9	5,364	256
Others	257	14	46	.....
Total	9,506	393	22,606	9,594

OKLAHOMA CITY.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Co.	1,776	948	1,331	161
Wilson & Co.	1,911	1,123	1,334	172
Others	198	27	493	5
Total	3,885	2,098	3,158	338

Not including 23 cattle and 1,144 hogs bought direct.

CINCINNATI.

	Cattle.	Calves.	Hogs.	Sheep.
S. W. Gall's Sons	.....	27	.....	208
E. Kahn's Sons Co.	518	161	5,077	698
Lohrey Pkg. Co.	2	.....	220	.....
H. H. Meyer Pkg. Co.	14	.....	3,488	.....
J. Schlachter's Sons.	161	103	.....	48
J. & F. Schroth P. Co.	21	.....	3,116	.....
J. F. Stegner Co.	178	145	.....	.....
Shippers	99	.....	3,220	240
Others	1,708	687	649	319
Total	2,701	1,125	15,770	1,513

Not including 337 cattle, 3 calves, 2,174 hogs and 485 sheep bought direct.

DENVER.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Co.	921	93	1,241	2,162
Swift & Co.	555	97	1,293	2,973
Cudahy Pkg. Co.	624	71	944	891
Others	1,114	110	1,012	1,703
Total	3,214	371	4,490	7,729

WICHITA.

	Cattle.	Calves.	Hogs.	Sheep.
Cudahy Pkg. Co.	864	538	612	3,419
Dold Pkg. Co.	506	54	482	17
Dunn Ostertag	68	.....	.....	.....
Fred W. Dold	98	.....	189	1
Sunflower Pkg. Co.	44	.....	115	.....
United Pkg. Co.	150	.....	.....	.....
Keefe Pkg. Co.	137	.....	.....	.....
Total	1,867	592	1,398	3,437

Not including 1,507 hogs bought direct.

ST. PAUL.

	Cattle.	Calves.	Hogs.	Sheep.
Armour and Co.	2,364	2,175	17,409	4,201
Cudahy Pkg. Co.	734	1,533	.....	.....
Swift & Co.	3,949	3,210	20,372	7,268
M. Rifkin & Son	364	27	.....	.....
United Pkg. Co.	1,826	254	.....	.....
J. T. McMillan Pkg. Co.	.....	261	.....	.....
Others	699	31	.....	.....
Total	9,936	7,491	37,781	11,469

Not including 8 cattle, 50 calves, 6,121 hogs and 955 sheep bought direct.

MILWAUKEE.

	Cattle.	Calves.	Hogs.	Sheep.
Plankinton Pkg. Co.	1,272	4,740	10,283	1,032
Armour and Co., Mil.	553	2,310	.....	.....
N. Y. B. D. M. Co.	20	.....	.....	.....
Michels Pkg. Co.	204	47	.....	.....
Shippers	147	21	24	3
Others	595	635	59	270
Total	2,791	7,753	10,366	1,305

INDIANAPOLIS.

	Cattle.	Calves.	Hogs.	Sheep.
Kingan & Co.	1,063	420	12,711	2,196
Armour and Co.	670	223	1,859	.....
Hilgemeier Bros.	9	.....	900	.....
Stumpf Bros.	.....	.....	104	.....
Meier Pkg. Co.	25	3	251	.....
Stark & Wetzel	61	6	254	.....
Wabnitz and Deters.	17	81	209	35
Maass Hartman Co.	22	10	.....	.....
Shippers	1,983	1,070	19,600	16,152
Others	514	137	233	70
Total	4,384	1,950	36,181	18,453

RECAPITULATION.

CATTLE.

	Week ended Jan. 1.	Prev. week.	Cor. week, 1936.
Chicago	34,151	29,029	35,560
Kansas City	13,732	14,702	16,076
Omaha*	14,184	12,842	14,742
East St. Louis	11,427	10,719	13,137
St. Joseph	5,369	4,734	5,940
Sioux City	9,506	8,036	10,131
Oklahoma City	3,885	5,250	5,813
Wichita	1,867	2,413	1,926
Denver	3,214	3,010	3,130
St. Paul	9,936	8,460	16,212
Milwaukee	2,791	3,496	3,360
Indianapolis	4,384	3,780	5,637
Cincinnati	2,701	2,022	2,140
Ft. Worth	....	6,151	....
Total	117,147	114,664	133,804

*Cattle and calves.

HOGS.

Chicago	58,720	52,630	53,677
Kansas City	5,598	7,090	6,230
Omaha	25,741	26,202	30,995
East St. Louis	29,085	42,908	39,784
St. Joseph	11,099	10,653	11,407
Sioux City	22,606	23,692	23,379
Oklahoma City	3,158	3,764	6,000
Wichita	1,398	1,806	2,762
Denver	4,490	4,553	10,331
St. Paul	37,781	36,908	25,506
Milwaukee	10,366	7,585	6,935
Indianapolis	36,181	23,305	24,890
Cincinnati	15,770	10,951	12,377
Ft. Worth	.....	2,956	.....
Total	261,993	255,003	254,273

SHEEP.

Chicago	46,487	41,102	35,551
Kansas City	13,913	10,036	19,762
Omaha	19,917	18,843	13,046
East St. Louis	10,079	9,264	8,256
St. Joseph	11,682	9,470	14,322
Sioux City	9,594	12,379	11,816
Oklahoma City	338	2,243	1,880
Wichita	3,437	3,290	3,518
Denver	7,729	2,474	12,149
St. Paul	11,469	14,020	29,178
Milwaukee	1,305	861	659
Indianapolis	18,453	7,599	10,749
Cincinnati	1,513	1,431	735
Ft. Worth	....	2,748	....
Total	155,916	135,670	161,621

CHICAGO LIVESTOCK

Statistics of livestock at the Chicago Union Stock Yards for current and comparative periods:

RECEIPTS.

	Cattle.	Calves.	Hogs.	Sheep.
Mon., Dec. 27	14,937	1,033	29,151	13,194
Tues., Dec. 28	6,515	1,543	17,443	5,545
Wed., Dec. 29	7,504	994	21,338	6,818
Thurs., Dec. 30	4,575	1,090	25,098	14,381
Fri., Dec. 31	700	300	9,000	4,000
Total this week	34,231	4,960	102,030	43,938
Previous week	27,388	6,683	87,412	37,399
Year ago	36,549	5,017	98,489	45,210
Two years ago	33,038	7,000	71,443	40,972

SHIPMENTS.

	Cattle.	Calves.	Hogs.	Sheep.
Mon., Dec. 27	2,737	224	6,266	4,868
Tues., Dec. 28	2,383	21	4,810	498
Wed., Dec. 29	2,507	59	4,010	275
Thurs., Dec. 30	1,734	364	3,510	4,566
Fri., Dec. 31	500	.....	2,000	1,000
Total this week	9,861	668	20,596	11,207
Previous week	8,148	595	17,551	9,845
Year ago	10,231	1,195	19,863	5,041
Two years ago	10,158	1,149	19,031	7,825

DECEMBER AND YEAR RECEIPTS.

Receipts thus far this month and 1937 to date with comparisons:

	December		Year	
	1937.	1936.	1937.	1936.
Cattle	165,205	188,920	1,980,907	2,234,065
Calves	26,992	29,860	386,162	410,836
Hogs	527,474	620,799	3,969,261	4,364,128
Sheep	217,662	216,397	2,502,311	2,595,393

WEEKLY AVERAGE PRICE OF LIVESTOCK.

	Cattle.	Hogs.	Sheep.	Lambs.
Week ended Dec. 31.	$ 9.30	$ 7.85	$3.25	$ 8.65
Previous week	9.00	7.95	3.35	8.75
1936	10.60	10.35	4.00	9.55
1935	9.30	9.35	5.00	10.95
1934	8.35	7.40	3.75	8.40
1933	5.30	3.40	3.75	7.55
1932	4.95	3.05	1.85	5.85
Avg. 1932-1936	$7.70	$6.70	$3.65	$8.45

SUPPLIES FOR CHICAGO PACKERS.

	Cattle.	Hogs.	Sheep.
Week ended Dec. 31	24,370	81,434	32,731
Previous week	19,182	68,776	28,422
1936	26,253	78,864	38,694
1935	23,624	62,860	37,457
1934	20,268	63,761	38,616
1933	23,300	132,000	47,300

HOG RECEIPTS, WEIGHTS AND PRICES.

	No. rec'd.	Av. wt., lbs.	Prices — Top.	Prices — Av.
*Week ended Dec. 31	102,000	237	$ 8.60	$ 7.85
Previous week	87,412	232	8.90	7.95
1936	148,489	230	10.70	10.35
1935	71,443	232	9.85	9.35
1934	103,574	220	8.00	7.40
1933	156,851	226	3.75	3.40
1932	139,772	230	3.40	3.05
Avg. 1932-1936	124,000	227	$7.15	$6.70

*Receipts and average weights estimated.

CHICAGO HOG SLAUGHTERS.

Hog slaughters at Chicago under federal inspection for week ending Friday, Dec. 31, 1937.

Week ended Dec. 31, 1937	98,486
Previous week	110,353
Year ago	89,990
1935	72,672

CHICAGO HOG PURCHASES.

Supplies of hogs purchased by Chicago packers and shippers week ended Thursday, January 6, 1938:

	Week ended Jan. 6.	Prev. week.
Packers' purchases	74,779	45,530
Direct to packers	25,046	23,520
Shippers' purchases	20,542	18,851
Total	120,367	87,901

U. S. MEATS TO CANADA

	Nov., 1937. lbs.	11 mos., 1937. lbs.	11 mos., 1936. lbs.
Beef	21,222	55,351	31,313
Bacon and ham	2,805	77,577	55,927
Pork	287,345	1,730,694	2,759,090
Mutton and lamb	1,184	10,340	11,186
Canned meats	5,326	109,196	151,889
Lard	.....	26,608	1,198
Lard compound	2,652	29,117	234,300

SLAUGHTER REPORTS

Special reports to THE NATIONAL PROVISIONER show the number of livestock slaughtered at 16 centers for the week ended January 1, 1938.

CATTLE.

	Week ended Jan. 1.	Prev. week.	Cor. week, 1936.
Chicago	24,078	21,034	25,418
Kansas City	16,264	18,733	19,583
Omaha*	13,527	11,341	15,583
East St. Louis	9,314	8,335	14,899
St. Joseph	5,480	5,246	5,903
Sioux City	7,522	6,310	8,053
Wichita*	2,459	3,444	2,771
Fort Worth	.....	6,151	.....
Philadelphia	1,514	1,637	1,988
Indianapolis	1,075	955	1,825
New York & Jersey City	7,237	6,836	8,817
Oklahoma City*	6,006	8,883	8,633
Cincinnati	2,701	2,359	2,140
Denver	3,180	3,605	3,521
St. Paul	9,237	8,180	9,010
Milwaukee	2,675	3,378	2,088
Total	112,269	116,427	130,232

*Cattle and calves.

HOGS.

Chicago	98,486	110,353	89,990
Kansas City	23,691	35,716	20,375
Omaha	26,472	36,985	21,269
East St. Louis	49,553	54,090	39,441
St. Joseph	10,268	14,715	7,855
Sioux City	21,754	37,747	15,607
Wichita	2,905	4,113	3,951
Fort Worth	.....	2,956	.....
Philadelphia	14,572	12,000	13,564
Indianapolis	13,241	8,653	9,412
New York & Jersey City	48,190	55,293	40,783
Oklahoma City	4,302	5,235	6,379
Cincinnati	15,770	10,668	12,377
Denver	.....	4,553	8,840
St. Paul	47,427	52,540	22,742
Milwaukee	10,366	7,414	847
Total	386,997	453,031	313,432

SHEEP.

Chicago	35,634	32,835	40,628
Kansas City	16,493	10,036	19,762
Omaha	15,918	13,886	15,707
East St. Louis	9,714	8,764	7,767
St. Joseph	11,451	9,470	13,882
Sioux City	9,338	13,299	10,732
Wichita	3,437	3,299	3,518
Fort Worth	.....	2,748	.....
Philadelphia	2,933	5,953	3,901
Indianapolis	2,778	1,934	1,601
New York & Jersey City	43,108	48,349	55,374
Oklahoma City	338	2,243	1,880
Cincinnati	1,513	4,481	735
Denver	4,066	2,474	6,700
St. Paul	11,469	12,350	21,981
Milwaukee	1,304	859	202
Total	169,494	172,980	204,370

RECEIPTS AT CHIEF CENTERS

Week ended Dec. 31, 1937:

At 20 markets:

	Cattle.	Hogs.	Sheep.
Week ended Dec. 31	152,000	361,000	188,000
Previous week	145,000	334,000	179,000
1936	163,000	326,000	230,000
1935	208,000	330,000	210,000
1934	206,000	346,000	198,000
1933	163,000	529,000	263,000

At 11 markets:

	Hogs.
Week ended Dec. 31	304,000
Previous week	287,000
1936	281,000
1935	232,000
1934	219,000

At 7 markets:

	Cattle.	Hogs.	Sheep.
Week ended Dec. 31	110,000	262,000	131,000
Previous week	99,000	247,000	117,000
1936	118,000	237,000	146,000
1935	120,000	195,000	154,000
1934	150,000	247,000	149,000
1933	127,000	393,000	199,000
1932	103,000	395,000	178,000

PACIFIC COAST LIVESTOCK

Receipts five days ended Dec. 31:

	Cattle.	Calves.	Hogs.	Sheep.
Los Angeles	4,785	1,537	1,038	2,136
San Francisco	515	60	1,250	2,450
Portland	1,400	200	6,150	3,200

DIRECTS—Los Angeles: Cattle, 10 cars; calves, 1 car; hogs, 113 cars; sheep, 28 cars. San Francisco: Cattle, 311 head; calves, 55 head; hogs, 2,250 head; sheep, 1,550 head. Portland: Hogs, 2,690.

MEAT SUPPLIES AT EASTERN MARKETS

(Reported by the U. S. Bureau of Agricultural Economics.)

WESTERN DRESSED MEATS.

		NEW YORK.	PHILA.	BOSTON.
STEERS, carcass	Week ending Dec. 31, 1937	8,046	2,173	2,238
	Week previous	7,373	2,116	2,355
	Same week year ago	6,761	2,214	2,105
COWS, carcass	Week ending Dec. 31, 1937	1,669	1,214	2,107
	Week previous	1,664	1,387	2,434
	Same week year ago	2,346	1,500	1,827
BULLS, carcass	Week ending Dec. 31, 1937	265	240	15
	Week previous	256	303	23
	Same week year ago	287	419	16
VEAL, carcass	Week ending Dec. 31, 1937	10,038	1,548	848
	Week previous	7,218	1,237	503
	Same week year ago	11,284	1,841	779
LAMB, carcass	Week ending Dec. 31, 1937	39,113	12,753	13,223
	Week previous	30,521	10,151	12,492
	Same week year ago	39,053	16,695	12,185
MUTTON, carcass	Week ending Dec. 31, 1937	3,654	586	597
	Week previous	2,735	1,184	628
	Same week year ago	3,423	554	594
PORK CUTS, lbs.	Week ending Dec. 31, 1937	2,623,703	613,168	326,094
	Week previous	2,378,554	593,754	325,626
	Same week year ago	2,409,388	544,402	318,376
BEEF CUTS, lbs.	Week ending Dec. 31, 1937	246,395	.....	.....
	Week previous	419,623	.....	.....
	Same week year ago	448,342	.....	.....

LOCAL SLAUGHTERS.

CATTLE, head	Week ending Dec. 31, 1937	7,237	1,514	.....
	Week previous	6,836	1,637	.....
	Same week year ago	8,817	1,988	.....
CALVES, head	Week ending Dec. 31, 1937	11,284	1,782	.....
	Week previous	13,662	2,604	.....
	Same week year ago	8,586	2,106	.....
HOGS, head	Week ending Dec. 31, 1937	48,190	14,572	.....
	Week previous	47,695	12,000	.....
	Same week year ago	36,206	13,564	.....
SHEEP, head	Week ending Dec. 31, 1937	43,108	2,933	.....
	Week previous	48,349	5,953	.....
	Same week year ago	55,374	3,901	.....

U. S. INSPECTED HOG KILL

At 8 points for the week ended December 31, 1937:

	Week ended Dec. 31.	Prev. week.	Cor. week, 1936.
Chicago	98,486	110,353	89,990
Kansas City, Kansas	23,691	35,716	20,375
Omaha	26,472	36,985	19,204
St. Louis & East St. Louis	49,553	54,090	39,441
Sioux City	21,754	37,747	14,259
St. Joseph	10,268	14,715	7,855
St. Paul	47,427	52,540	22,742
N. Y., Newark and J. C.	48,157	55,293	40,783
Total	325,808	397,439	254,649

BOURBON YARDS 103 YRS. OLD

The year 1938 marks the 103rd birthday of the Bourbon Stock Yards, Louisville, Ky. The largest breeding ewe market in the world, the primary lamb market of the Southern Middle West, a great stocker and feeder market also, it has fifteen acres of pens and alleys under one roof. President Ernest L. German thinks 1938 is destined to be the greatest year in its history. Last year winter feed supplies were uncomfortably short in many sections, and another season of drouth would have dealt a devastating blow to livestock. Now, however, corn-cribs are filled to overflowing and temporary structures hold the surplus. Though livestock prices have declined, they have not declined to the extent of feed prices. The outlook continues good, according to Mr. German.

LIVE CATTLE IMPORTS

Approximately 100,000 more cattle and calves were imported into the United States during the first 11 months of 1937 than in the like period of 1936. Import in the 1937 period totaled 486,588 head compared with 386,747 in the first 11 months of 1936.

Considerable increases occurred both in cattle weighing 700 lbs. and over and in cattle weighing from 175 to 700 lbs. Both Canada and Mexico increased their shipments of cattle of these weights.

Imports for November, and November a year ago, and those for the 11 months of the years 1936 and 1937 are reported as follows:

	Nov., 1937.	Nov., 1936.	11 mos., 1937.	11 mos., 1936.
Cattle,				
700 lbs. or over:				
Canada	1,883	1,857	163,472	142,191
Mexico	224	527	24,792	21,962
Total	2,107	2,384	188,264	164,153
175 to 700 lbs.:				
Canada	4,199	4,495	49,840	33,653
Mexico	7,533	4,298	167,291	131,941
Total	11,732	8,793	217,131	165,594
Under 175 lbs.:				
Canada	2,103	1,386	79,188	54,602
Mexico	...	...	1,259	1,615
Total	2,103	1,386	80,447	56,217
From other countries	8	97	746	783
Total all cattle	15,950	12,660	486,588	386,747

C-D

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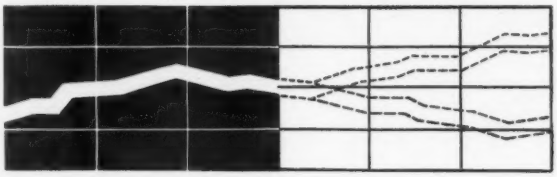

The only certain thing about pork prices, for the next few months, is that they will be uncertain. They will react to every change in domestic and international affairs.

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UP and DOWN the MEAT TRAIL

Meat Packing 40 Years Ago

(From The National Provisioner, Jan. 8, 1898.)

World supply of lard on January 1, 1898, consisted of 370,244 tierces compared with 494,146 tierces a year earlier. Of the Jan. 1, 1898 total, 198,000 tierces were in Europe or afloat.

During the week at Chicago prime hogs sold for $3.60 per hundred live weight and choice 1564 lb. steers at $5.50 per cwt.

Swift & Company at Kansas City reported the largest business in the company's history at that point during 1897.

Among New Year honors bestowed by Queen Victoria of England was a knighthood for Thomas J. Lipton, owner and operator of a large packinghouse in Chicago.

Partnership of William Moland, William N. Moland and George N. Moland, trading as William Moland & Sons, Philadelphia, was dissolved on January 1, 1898, as a result of the death of William Moland. The business was continued by William N. Moland and George N. Moland as co-partners under the name of William Moland's Sons.

Ward & Storey Packing Co., San Francisco, Cal., was incorporated by George J. Ward, Walter Storey, W. M. Lacey, G. A. Berger and John C. Lutz.

L. F. Edwards, Florida manager for Armour and Company, made arrangements for erection of a branch house at Tampa, Fla.

Meat Packing 25 Years Ago

(From The National Provisioner, Jan. 11, 1913.)

Stockholders of Swift & Company voted to extend the charter of the company to 1984 at the annual meeting held on January 9, 1913. President Louis F. Swift reported that the year's business was quite satisfactory, both as regards volume and profits.

Harris Abattoir Co., Toronto, had under construction a new plant with a capacity of 4,000 cattle and 2,000 sheep weekly to take care of its expanded business.

Cleveland Provision Company, Cleveland, O., disposed of its chain of retail markets consisting of 23 stores scattered throughout the city. Stores were sold to Citizens' Provision Co., with R. P. Nash, a director of the packing company, in charge.

Lafayette Packing Co., Lafayette, Ind., was bought at sale by Ferdinand Dryfus for $15,000. The plant had been closed for three years.

Slaughtering was started in the new 8-story plant of Jos. Stern & Sons in West 40th St., New York City.

Gerber Packing & Provision Co., St. Louis, was incorporated with a capital stock of $30,000 by S. B. Jeffries, C. D. Corwin and others.

Greenwald Packing Co., Baltimore, Md., Michael Greenwald manager, moved its wholesale market to 414 So. Eutaw St., with larger facilities for handling fresh meats.

Cudahy Packing Co. completed plans for erection of a large branch house at Memphis, Tenn.

Chicago News of Today

E. S. Waterbury, general manager, Armour and Company, Omaha, Neb., was in Chicago this week.

Forrest W. Hagerman, sales manager, Tobin Packing Co., Fort Dodge, Ia., was a visitor in Chicago during the week.

Archer E. Hayes, president, Hately Bros. Co., is among the candidates from whom five directors of the Chicago Board of Trade will be chosen in the exchange election on January 10.

J. J. Quinn has been appointed chairman of the national perishable freight committee, with headquarters at Chicago, to succeed R. C. Dearborn, deceased.

Andries D. van Creveld, director of Fa. D. van Creveld, Rotterdam Holland, was a visitor in Chicago during the week. He returned East via Detroit and Cleveland and will spend two weeks in New York City.

W. A. Johns, former general manager, Swift & Co., Jersey City, N. J., who retired after 42 years of service with Swift, was a visitor to Chicago this week and got a warm greeting from his host of friends. Leisure seems to agree with him, as he looks younger than ever.

J. H. Edmundson, former president, Chas. Wolff Packing Co., Topeka, Kas., and recently sales manager, Miller & Hart, Chicago, has been made assistant to the president of Cold Storage Co., in charge of cold storage of meats, fruit and other perishables. He will give special attention to meat storage and service to meat concerns desiring storage accommodations, among whom he numbers an army of friends.

A. L. Blair, general plant auditor, Cudahy Packing Co., Chicago, retired on December 30 after 42 years in the service of the organization. He entered Cudahy employ as a clerk in the North Chicago branch in 1895 and served at various branches throughout the Middle West and in 1903 was appointed office manager at Sioux City. After a period in a similar position at Omaha he was made general plant auditor with headquarters at Chicago, a position he has occupied for the past 20 years. Mr. Blair is well-known in the packing industry and enjoys the friendship and esteem of thousands of workers of the Cudahy company.

A. L. BLAIR

Dr. Fernand Kabus, specialist representing the Angostura-Wuppermann Corp., which is promoting improvement in processing of sausage, hams, lard, etc., through the use of Angostura bitters, was a visitor to Chicago during the week.

Frederick H. T. Walton, Forest, Va., a well-known figure in packinghouse circles in the old days, was a visitor in Chicago this week. Mr. Walton was associated with Armour and Company for many years and later was active in packinghouse development in South America, having built a number of plants in several countries south of the Equator. Retiring from active business, he bought and operates a 1,008-acre farm in Virginia, where he spe-

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Scene in McAbee Chow Kennels, Akron, O., where the dogs get a balanced ration.

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* * *

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* * *

The thin sides of hogs are "profit" not "loss" items when you make them up into Roman Bacon. Mapleine turns the trick. Makes a repeat item out of this low cost, good profit specialty. This formula is free too.

* * *

There are flavorings and flavorings. But there's only one Mapleine. For a third of a century it has meant flavor perfection (and protection) to manufacturers everywhere. Insist on Mapleine. Look for the Crescent.

* * *

If you know Mapleine you'll want to try these business-getting ideas. And if you've never tried it write for a test bottle. We'll send it to you free. Just write Crescent Mfg. Co., 641 Dearborn St., Seattle, Wn.

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cializes in pure-bred Angus cattle. He still carries the gold watch given him by P. D. Armour, founder of Armour and Company, on May 1, 1891. In all these 47 years, he says, his only expense on this watch has been periodic cleaning.

"It Was His Own Fault" was the subject of an address by Harvey G. Ellerd, vice president, Armour and Company, in charge of employe relations, at the third of a series of five monthly safety meetings at the Stock Yards Inn this week. The meetings are sponsored by the Greater Chicago Safety Council for industrial employes in Chicago and their families.

New York News Notes

S. C. Frazee, executive department, Wilson & Co., Chicago, visited in New York before sailing on the s.s. Berengaria, on January 4, for England and later for South America. Ted Tod, advertising department, Wilson & Co., Chicago, also spent a few days in New York last week.

C. T. Richardson, construction department, Swift & Company, Boston, was in New York last week. Another visitor from Swift & Company, Chicago, E. L. Morris, who is in New York in connection with the company's proposed exhibit at the New York World's Fair of 1939.

Emil A. Laier, well-known packinghouse expert, is now connected with the Hygrade Food Products Corp., as general superintendent of the Newark, N. J., plant.

R. W. Vohl, superintendent, New York Butchers Dressed Meat Co. visited Chicago last week to attend the meetings of superintendents of the various plants of Armour and Company.

Edward F. Jackson, manager, Kingan Provision Co., New York plant, visited at the company's headquarters in Indianapolis for several days during the past week.

Countrywide News Notes

Chas. A. Roberts, general manager, Cudahy Packing Co., Los Angeles, Calif., has been made regional chairman for the Institute of American Meat Packers for the Southern district of California, which takes in all of California from San Luis Obispo county to the Southern border.

Phil Hantover, sausage missionary with the Independent Casing Co., is rapidly recovering from a recent automobile accident and expects to greet his friends in the industry as usual about February 1.

T. G. McElroy, advertising manager of John Morrell & Co., Ottumwa, Ia., until his retirement in 1935, passed away on December 21 at the age of 61. He had been in ill health for several years and retired to secure an extended rest. Mr. McElroy was a member of the Morrell organization for 34 years, becoming associated with it in 1895. He was made head of the advertising and canned food departments in 1909 and was complimented on retirement by Morrell officials for his long and efficient record. He was widely known throughout the meat industry.

T. G. McELROY

J. Morrell Foster, Sioux Falls, S. D., secretary of John Morrell & Co., is South Dakota chairman of the national advisory committee of the New York World's Fair 1939. Mr. Foster heads a group of 100 South Dakota citizens, prominent in the affairs of their state, who will create and maintain interest in the fair in their section.

E. N. Sturman, formerly vice president in charge of the Flavor Sealed division of Geo. A. Hormel & Co., Austin, Minn., has been appointed general sales manager of Hiram Walker, Inc.

R. E. Montgomery, president of the National Cottonseed Products Association in 1918-1919, and prominent in cotton oil circles, died at his home in Palestine, Tex., on December 23. He was manager of the East Texas Cotton Oil Co. mill at Palestine.

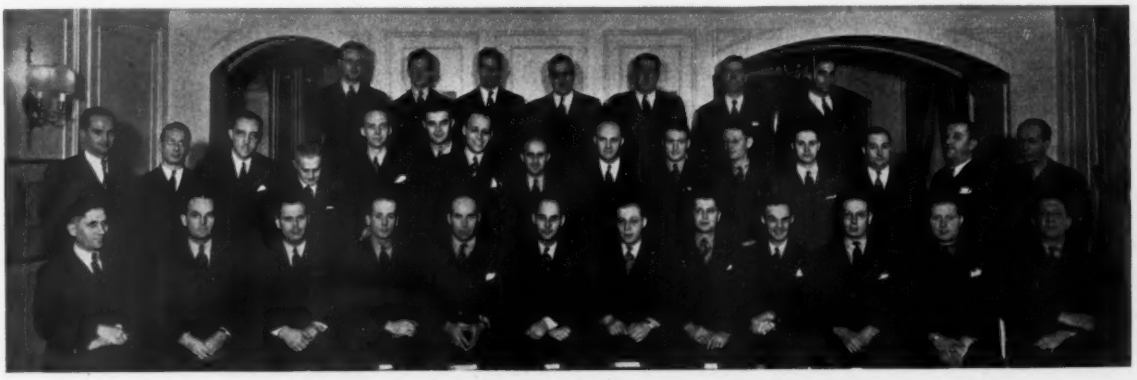
W. H. Michie has been promoted from assistant manager to manager of the transportation department, Geo. A. Hormel & Co., Austin, Minn.

SAUSAGE EDUCATION

Coast-to-coast sales personnel of the Visking Corporation held a four day convention at the Morrison hotel, Chicago, from December 27 through December 30. Opening with an address by H. R. Medici, vice president in charge of sales, the meeting was presided over by E. J. Marum, sales supervisor.

In place of oratory for 4 days there was a display of shirt sleeves as salesmen went into actual demonstrations of up-to-date applications of "VISKING" casings to packinghouse problems. H. R. DeCressey, divisional sales manager for the Pacific Coast, carried on extensive demonstrations of the latest developments in making and merchandising skinless frankfurters. Alex Chesser, divisional sales manager in the East, showed the assembly the most efficient ways of stuffing hams, butts and Canadian type bacon.

The meeting was a healthy one because each salesman was able to bring up problems peculiar to packers in his territory, have them worked out before the group, with all profiting by actual demonstration. There were presented new ways of decorating baked hams, newer methods of stuffing skinless frankfurters, formulas for loaves and large sausages which have developed since the last meeting. Emphasis was laid on keeping the meeting practical in every aspect, and discussion covered all phases of merchandising of new products for Visking customers, as well as applications. The convention closed with a banquet for the salesmen at the Standard Club of Chicago.



VISKING HOLDS A WORKING SALES CONVENTION

Actual demonstrations of up-to-date applications of sausage casings to packinghouse problems were featured during the four-day sales convention of the Visking Corporation, held in Chicago, Dec. 27-30, 1937

Operating Progress

(Continued from page 27.)

process. Any one who has been able to see how clean the hog carcasses appear after the dried coating of adhesive has been peeled away is enthusiastic about this procedure. The fact that not only the hairs are removed, but also the roots, means much in the appearance of the finished product and in the saving of trimming of heads and other parts difficult to shave. This development should mean as much to the industry as the invention of the dehairing machine in its time.

Inedible Processing

As we go from the killing department to the by-products division we find some recent experiments with the drying of blood based on the principle of the cream separator. The blood particles are finely distributed by centrifugal force and are dried while falling through a heated cylinder.

Undoubtedly we shall hear more about installations of this type during the next year. We all know the destructive chemical action of blood on the conventional melter and drier. As experience is gained on a few installations, this method will find a ready field for application.

In the same class and division we find a dry rendering method combined with the extraction of grease by a solvent. This procedure has been placed on the market by one of the equipment manufacturers after a good deal of research work.

Other Improvements

Casing Cleaning.—In the field of fresh cleaning of casings one manufacturer has developed machines which combine the operations of two pieces of equipment. The result is that fresh cleaning of casings is now available to many packers who formerly did not have the space to place this equipment.

Sausage Progress.—In the sausage and smoked meat department we find the tendency to grind and mix the meat and stuff the sausage under refrigeration. The advantages in lower operating cost and better sanitation are so pronounced that it is only a matter of time until all plants will house these operations in low temperature rooms.

Sausage making equipment has been steadily perfected along conventional lines during the last few years. A recently-developed machine operates on a new principle. Here again we find centrifugal force applied to the distribution and mixing of meat while it is being cut. The advantages claimed are saving of labor and retaining of the original meat juices. At present this machine is only available in a price range suited for larger plants. The design of smaller, more compact units is to be expected.

Smokehouse Improvement.—From sausage stuffing to the smokehouse is only a step. For years the good old smokehouse has been improved by correct proportioning, proper smoke chambers, better insulated doors and modern burners with controlled air and gas supply. We have added steam coils to control temperature, besides controlling the density of smoke, and now we have the completely mechanized smokehouse.

The problem has been attacked from two sides with good initial success. Recent installations have separate control of temperature, humidity and density of smoke. Scientific smoking is still somewhat on an empirical basis. As information is accumulated by the manufacturers of this equipment and by the packers using it more consistent results will be obtained.

Air Conditioning

There is increased interest in the control of relative humidity, besides the control of temperature, for the various departments. The term "air conditioning" is now as familiar as "profit and loss."

An interesting recent installation increases the relative humidity to 90 per cent in the cooler by the admission of exhaust steam. The procedure of admitting steam—always connected with heat in our minds—into coolers, where we artificially maintain a lower temperature, is a paradox. The amount of heat, however, is so small in comparison with the moisture gained that it has proven satisfactory.

Experiments have been made abroad using ozone in the rooms to prevent bacterial action. Until now this method has not been tried in the United States.

Refrigeration and Power

Under the heading of refrigeration the evaporating condenser is of more recent origin. Briefly, it consists of coils for the refrigerant over which water is sprayed. Air is circulated rapidly over these wet coils by means of a fan. This current of air absorbs the water on the coils quickly, and the heat of evaporization is utilized in cooling the coils.

Plants in districts with high rates for electric current are turning more and more to steam turbines and Diesel engines for the generation of their own power. Using the latter type of equipment, it is often possible to decrease the cost of electricity by 50 per cent.

Plant Design and Construction

In the structural design of our plants welding is more and more taking the place of riveting in the assembly of structural members. This enables us, for instance, to design columns and beams or two adjacent beams as one unit. The negative moments created by this arrangement result in smaller field moments and permit the use of smaller beams.

A recent development, not yet ready for the packinghouse field, casts hollow clay tile and concrete beams as one integral unit. These units can be placed from beam to beam, thereby saving the cost of wood forms for concrete slabs.

Glass bricks are more and more employed to give light and insulation with low maintenance cost. Corrugated actinic wire glass for large skylights will provide an abundance of natural light in those rooms requiring it. Due to the corrugations it can be applied over large spans and is practically self cleaning.

Better Lighting

Too little importance has been placed in the past on the proper illumination in the packing plant. The light outlets were distributed in a haphazard manner by rule of thumb, rather than by proper investigation into the light requirements for each operation. The tendency has been to increase the intensity of light. This assures better work by the employee, fewer accidents and protection of the vision of the worker.

With the increased specific illumination must go proper planning, so that the harmful effects of glare are avoided. During some studies made in a beef cooler, it was found that a properly designed reflector gave a higher illumination on the beef sides for less wattage than the reflector chosen by rule of thumb.

In the field of interoffice communication a new device is replacing the conventional switchboard and telephones. Workers and department heads answer the call from the main office simply by speaking in the direction of a suspended "mike" and receive the answer by a suspended loudspeaker.

Plant Operation

The tendency to operate several smaller plants close to the livestock areas in preference to super-plants located in the big cities will continue. The necessity of absorbing a larger part of our labor supply may be the incentive for operating the plants on a 12-hour basis—two shifts of 6 hours each—rather than on the 8-hour basis.

"Eye appeal" is now an established factor in the sales policy of all plants. Great care is taken to give product, trucks and sales force a pleasing appearance. More and more packers are aware of the fact that the appearance of the plant is an additional good advertising medium. Side by side with the study of the plant to make it more economical and efficient goes the effort to give it a dignified and pleasant exterior.

Since human effort never stops, we may look forward to equally interesting developments during the next year as we have witnessed in the year of 1937.

LESS POULTRY CANNED

Less poultry was canned in November, 1937, than in the same month a year ago, the 21 principal companies engaged in the business reporting a decline of 29.15 per cent. Volume canned in November totaled 1,766,531 lbs. compared with 1,990,768 lbs. in October and 2,493,003 lbs. in November, 1936.

New Equipment Ideas

By OSCAR SCHMIDT
Vice President, Cincinnati Butchers' Supply Corp.

THE year 1937 has seen many new developments in the packinghouse and sausagemaking industry. Some of the improvements made included new and almost revolutionary methods. Some of the ideas developed will be improved upon to the benefit of the industry, others will be tried out and discarded as their shortcomings are revealed.

OSCAR SCHMIDT

We are happy to have had a share in the developments made in 1937, as we have had in the past. Among these developments are: Our new figure 521 "Boss" silent cutter, embodying in its design and construction new ideas in principle of operation which prevent shortening of the product and result in larger and improved yield and better and more uniform texture. These results are secured with less horsepower requirements for the actual capacity load of finished product. In 1937 we made this new improved cutter in only two sizes, 375 lbs. and 750 lbs. capacity. We are extending the line to five sizes, starting with a 100 lb. capacity and up to 750 lbs.

We have further extended our line of sausage stuffers to include six sizes—100, 150, 200, 300, 400 and 500 lbs. capacity. The patented leak-proof piston used in the "Boss" stuffer is the only piston which can be adjusted without taking it out of the stuffer.

Our meat loaf or pan filler has been improved to give an increased capacity up to 20 pans per minute.

Grinders and Plates

The "Boss" grinder has been redesigned to give still greater capacity without increasing—even decreasing—the horsepower required. The new longer super-fast cylinder with super-fast feed screw has proved its worth after a thorough trial and is about ready to be placed on the market. Newly designed machinery, almost entirely automatic, to manufacture the "Boss" super plates and other plates, is ready to go into full production soon in our plant.

Among other improvements marketed in 1937, or nearly ready for release, are these items for beef killing—"Boss" beef dropper (from bleeding rail), beef lander and V-type tripe scalder.

Other New Equipment

For hog killing equipment and machinery improvements have been made in the following items:

New scalding water circulating system; Jumbo two-way "Boss" hog dehairers—such as the outfit installed the first of the year 1937 in the plant of E. Kahn's Sons Co., Cincinnati; Jumbo dehairers installed in the plants of Iowa Packing Co., Des Moines, and St. Louis Independent Packing Co., St. Louis, Mo.

Other "Boss" improvements included items for hog cutting, overhead tracking and rendering machinery as follows:

Redesigned conveyor type pickled meat washer, snout puller, jaw puller, combination snout puller and jaw puller, roller feed device to feed overhead trolleys one at a time into conveyor line; paunch lift or skip hoist, Jumbo hasher for rendering plants, shredder or hog "V" belt drive.

Looking Ahead

Many other ideas are still in an embryo state. Some of these may never see the light of day, as further investigation and checking may reveal that they are impractical or more expensive to use than present methods in use in packinghouses. As the others are developed and proved to be of benefit to the packers and allied industries they will be announced and submitted for the trade's acceptance.

In all we are expecting a good year in 1938, though we feel that possibly the start of the year will be somewhat under 1937.

MUCH TO BE LEARNED

In reviewing progress and development in plant operations in the meat packing industry during the past year A. Ewing Sinclair, general superintendent, Kingan & Co., Indianapolis, Ind., emphasizes the fact that while much has been learned, there is further possibility of progress, particularly on the subject of chilling of hogs and in the field of air conditioning throughout the packing plant.

"To my way of thinking," he writes, "the greatest developments during the past year in packinghouse engineering seem to revolve about two pieces of machinery with which we have had some little experience—the new method of depilating hogs, which was perfected at the plant of the Tobin Packing Co., and the Roto-Cut sausage machine.

"In our opinion the rosin dip is a very satisfactory means of depilating hogs. Hogs coming out of this machine are far superior to any hogs cleaned in any other manner. In addition, there are quite substantial savings in the maintenance of hog scrapers, and the product turned out from these machines contains more No. 1 cuts than before.

"Although there has been a great deal of discussion upon the benefits of the Roto-Cut, our experience with this machine has been very satisfactory. There is considerable saving in maintenance and repairs, since there is only one piece of machinery to worry about, instead of three under our former method.

"There has been a great deal learned in the last year, but I feel certain there will be more learned this next year, particularly in regard to the chilling of hogs and air conditioning in packinghouses in general."

Cutting Sausage Costs

By R. C. SMITH
President, John E. Smith Sons Co.

MARGIN of profit of sausage manufacturers during 1937 was affected by two general conditions—

1.—Exceptionally high prices of raw materials;

2.—A material increase in cost of labor.

The result was that many firms turned to high-capacity equipment to offset these higher production costs. In fact—from the standpoint of sausage manufacture—this shift to more efficient machines was undoubtedly the most outstanding development of the year. These investments enabled production of a greater volume of better quality sausage products in shorter time, and a reduction of production costs by eliminating the necessity of paying a premium on overtime to workmen to finish a job.

R. C. SMITH

How Costs Can Be Cut

How this worked out is illustrated in the case of our new model, self-emptying silent cutter with a capacity of 800 lbs., which we brought out in 1937.

With this machine it requires no longer to cut 800 lbs. of meat than it does to cut 600 lbs., 350 lbs., or 250 lbs. in smaller models. Also, because of the perfected construction of this new cutter it requires no more power to operate the machine cutting 800 lbs. than it does a smaller machine cutting 600 lbs. Space required in a sausage plant is very little greater for this new model machine than it is for a 600-lb. machine.

During the year we have made many improvements on our line of sausage machinery which have increased their efficiency, the most spectacular being the development of the Buffalo vacuum mixer. This new method of mixing is tied in with new curing formulas and has not been advertised or discussed very freely, due to the fact that it has been in an experimental stage. Recently, however, some very interesting reports have reached us from users who claim its installation has enabled them to save time and money.

In 1938 we may expect to see a continuation of the movement towards larger, more modern and efficient sausage machinery to cut operating costs.

According to all predictions the livestock situation will clear up during 1938, so that meat prices should be more favorable to sausage manufacturers. With the time-saving machinery now obtainable, that will produce a better quality product at the right price, the coming year should be a very profitable one for all concerned in the industry.

Sausage Progress

By C. W. DIECKMANN

Pres., Specialty Mfrs. Sales Co.

PACKERS and sausage manufacturers produced and sold in excess of 800,000,000 lbs. of sausage and meat loaves during the 1937 fiscal year—the largest sausage production, with one exception, since 1927.

THE "OLD TIMER"

Eight hundred million pounds is a lot of sausage, but even this huge volume is by no means the limit to which sausage production and sales can be carried. Continued production of high quality, more attention to efficient merchandising and, in particular, education of retailers to the profitableness of attractive display and attention to methods of interesting consumers in sausage, would before long, I believe, push sausage sales well above the record established this year.

New Sausage Ideas

In this connection I believe every sausage manufacturer might profitably devote some time and effort to devising new, tasty sausage and meat loaf items. Newness and novelty are powerful sales forces. Also, there are additional volume possibilities in encouraging consumers to become more regular sausage purchasers. New products with eye and sales appeal are always a temptation to buy.

If there is any outstanding need, so far as production is concerned, I believe it is greater attention to develop flavor possibilities in sausage. This means more seasoning care to secure better than average results. After all, when a housewife purchases sausage she expects something more than just a meat flavor.

Offsetting Higher Costs

Despite the readiness with which good sausage sold last year, the sausage manufacturer had production difficulties which affected his profit spread. Principal among these were the high cost of raw materials and a high labor expense.

So far as I have been able to determine, few packers endeavored to maintain their profit margin by cheapening the quality of their products. Had many of them done this it is certain that volume never would have reached the peak it did. The problem was attacked from the other end—to cut production costs by more efficient and economical equipment and elimination of waste and loss wherever possible.

So far as equipment was concerned two trends were evident—

1.—Abandonment of small, low-capacity, inefficient machines and their replacement with larger and more modern ones. Large savings in time, floor space, power and labor were thus made.

2.—A growing disposition to take the long view toward equipment purchases. First cost was less a consideration than service life and production cost per unit of product.

Equipment Trends

Today, for example, packers and sausage manufacturers are demanding the best in plates and knives, because they have learned they are the cheaper. Every sausage manufacturer appreciates the economy of the O.K. knife with changeable blades in comparison with the solid knife. The latter required frequent grinding and was short-lived. The improved knife with changeable blades cuts 50,000 lbs. of meat before even the blades needed renewing. The new Triumph knife reduces grinding costs another notch. It has demonstrated its ability to cut 400,000 lbs. or more of meat before the blades need renewing.

Better Efficiency Coming

The modern plate offers another opportunity for the sausage manufacturer to save. The new Triumph plate will handle 1,000,000 lbs. or more of meat before it needs resharpening. A 10-year life is guaranteed. These knife and plate savings are important, and are helping many sausage manufacturers to maintain their profit spread in the face of constantly rising overhead costs.

The sausage manufacturer's problems may or may not be more serious next year. Whatever the situation is, I believe the members of our industry have the ability and ingenuity to meet it successfully. Of one thing I think we may be sure. This is that sausage manufacture is definitely on the way to becoming a much more efficient procedure, through the use of more modern methods and improved equipment. The sausage manufacturer who fails to heed this trend and keep in step with it may very quickly be placed in an unfavorable production and merchandising position.

PLANT ACTIVITES

Organizers of the Carolina Packing Corp., Selma, N. C., have secured an option on a 65-acre site for a proposed meat packing plant. Plans call for a 2-story main building, 60 x 150 ft., constructed of glass brick. The plant would have a capacity of 350 hogs, 100 cattle and 200 sheep and facilities for handling and storing eggs, potatoes and fruit.

Rognes Packing Co., Madison, S. D., idle since last spring on account of a hog shortage in the vicinity, has been reopened. The plant resumed operations at about the same capacity at which it had been running when operations were suspended in March.

Modernization Needed

By CHAS. H. DODGE

President, The Globe Company

THE future for our business looks bright and I anticipate continued improvement during the next five years. More and more packers are coming to appreciate the need for modernization—

CHAS. H. DODGE

for new machinery that will do a better job, in shorter time, and with less man power. In fact, progress and new developments have reached a stage where packers realize absolute necessity for new equipment to enable them to "keep up with the parade." Otherwise competition will get so far ahead that they will find it impossible to keep up with others in the field.

Some indication of our faith in the future may be gathered from the fact that we have completed plans for moving our plant to a new location, where we shall have ample room for growth and still further expansion. Our past record, and the reception that has been accorded our new equipment, gives us ample grounds for anticipating a highly successful year in 1938.

New Methods

Among the more important developments in plant methods in the industry during 1937 may be mentioned the following:

A depilatory that is as economical as it is revolutionary, and so compact that it can be fitted into a minimum space without requiring any major structural plant changes. Stripping of the plastic coating removes every hair by the roots, thus eliminating entirely any need for shaving or singeing.

A spiral wire tongue guard that precludes any damage occurring to hog tongues during dehairing process. Also an applicator for speedy insertion and quick removal of the guard.

A machine for cutting and mixing sausage and loaf products, or any product incorporating finely-cut meats, known as the Roto Cut. An outstanding feature of the machine is its great capacity—as much as 5,000 lbs. per hour of cut and mixed product can be turned out by two men—capacity depending largely on the fineness desired. Cycle of operation is practically continuous, charging and discharging being accomplished in but a few seconds, without stopping the machine.

WANT A GOOD MAN?

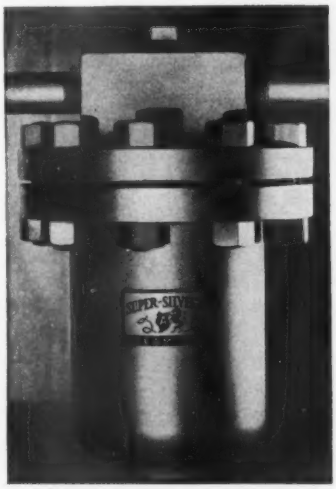
For good experienced men try the "Classified" page of THE NATIONAL PROVISIONER.

BUYER'S GUIDE
to new machinery, equipment and supplies

FORGED STEEL STEAM TRAP

Silvertop forged steel steam traps, familiar to most packinghouse engineers, have been redesigned for greater capacity and higher pressure and temperature work. No sacrifice of any of the important characteristics for which these traps have been famous—including economy, simplified piping, accessibility and reliability—has resulted.

The new trap, known as the Super-Silvertop, made by V. D. Anderson Co., Cleveland, O., averages 122 per cent greater condensate capacity than the



FOR HIGH CAPACITY

New forged steel Super-Silvertop steam trap which averages 122 per cent greater condensate capacity than older designs.

older model, it is stated. It is available for pressures from 150 to 700 lbs. Case and head are of forged steel. Gasket joints are of the recess type to prevent any possibility of gasket blow-outs. Head bolts are of heat treated alloy steel having high tensile strength. Valves and seats are Anderloy, a special chrome alloy with high resistance to erosion and wire drawing. All other parts, including buckets, are of stainless steel. After assembly all traps are given a final test under 1,400 lbs. hydrostatic pressure to check tightness of valves, gasket joints and strength of forged pieces.

HOW TO GET A GOOD MAN

Watch the "Classified" page for good, experienced men.

REFRIGERATION INSULATION

Basic problems involved in insulation —for all types of refrigerated containers from household refrigerators to railroad refrigerator cars—are analyzed in a new 44-page booklet, "Fundamentals of Good Refrigerator Insulation", just published by the Dry-Zero Corp., Merchandise Mart, Chicago.

The booklet is not a piece of sales literature, but a simple, concise explanation of the theory of insulation and its application to everyday refrigeration, according to Harvey Lindsay, president of the company and a recognized authority on the subject. While the subject matter is technical, the booklet has been written for non-technical men as well as technical men.

The first section of the booklet deals with the manner in which insulating materials retard the passage of heat and explains why various insulating materials behave as they do under practical conditions. The second section discusses the influence of moisture, which is always present in refrigerator walls, how and why it affects the efficiency of insulations and how the dangers of moisture penetration can be minimized and even overcome, for practical purposes. The third section deals with some of the test results obtained by Dr. J. L. Finck at the U. S. Bureau of Standards, and the final portion of the booklet is devoted to a forecast of future developments in the field.

CELLULOSE FILM PLANT

E. I. duPont de Nemours & Co. has announced that a new manufacturing plant for production of "Cellophane" cellulose film will be erected at Clinton, Ia., on a 230-acre tract of land. Upon completion, the plant is expected to employ approximately 500 persons. It will be the company's first unit for production of cellulose film West of the Mississippi, and will comprise about 20 acres under roof. Similar plants are already located at Nashville, Tenn., Richmond, Va., and Buffalo, N. Y.

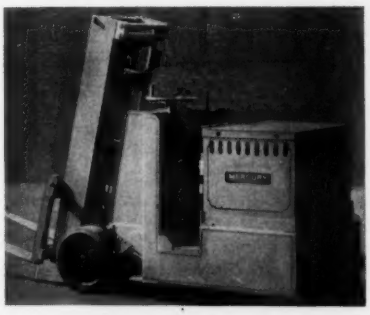
KOLD-HOLD OFFICERS

At a recent annual meeting of the Kold-Hold Manufacturing Co., Grand Rapids, Mich., which is a leader in the field of truck refrigeration, the following officers were elected: J. R. Tranter, president; J. M. Degnan, vice-president; Carl Reynolds, secretary; L. H. Hull, treasurer.

NEW TILTING FORK TRUCK

A new model Mercury plant truck is a two-wheel, front-wheel drive, rear-wheel two-wheel steer unit of center control type. This model is available in four wheel base sizes, 50 in., 54 in., 60 in. and 66 in. The latter model has a maximum capacity of 10,000 lbs. on 36 in. long forks.

Of telescopic lift type and with hydraulic actuation of fork elevation, the forks travel from a lowered position of 1¾ in. above the ground to a height of 107 in. Telescopic fork elevation to a height of 144 in. is available, if required, or the truck can be furnished in the high or single lift type with fork elevation to a maximum height of 57 in.



NEW TYPE PLANT TRUCK

This new model Mercury truck comes in four wheel base sizes, has a speed of 5 miles per hour and a maximum capacity of 10,000 lbs.

Forks are adjustable center to center, adjustment being accomplished through use of a demountable crank which moves the forks by means of a rack and pinion arrangement. Permanently spaced forks with rigid load back rest can be specially supplied if required by the user.

Drive axle is of the double reduction spiral bevel and spur gear type, and the rear or trailing axle assembly is of the compensating controlled castor type. Steering mechanism is of the Ross cam and lever type and steering control is by means of a horizontally-disposed wheel. Battery power assembly is housed in a demountable box compartment permitting quick removal and replacement of power source. The truck will accommodate either battery box compartment or gas-electric unit power source if same is desired.

This machine has a travel speed of 5½ miles per hour light and approximately 5 miles per hour with full load.

PRODUCE MARKETS

BUTTER.

	Chicago.	New York.
Creamery (92 score)	@32¾	34¼ @34½
Creamery (90-91 score)	30 @31¼	@33¾
Creamery firsts (88-90 score)	30 @31¼	32 @32¾

EGGS.

Extra firsts	24 @24½	.....
Firsts, fresh	22¼ @22¾	@25¾
Standards	.....	@24

LIVE POULTRY.

Fowls	12 @23	22 @27
Springs	24 @25	18 @24
Broilers	18 @23	23½ @25
Capons	24 @28	25 @30
Old Roosters	14 @15	@17
Ducks	12 @24	@22
Geese	12 @18½	@20
Turkeys	18 @24	@32

DRESSED POULTRY.

Chickens, 36-42, fresh	@26	@26½
Chickens, 43-54, fresh	@26	@27
Chickens, 55 & up, fresh	@26	27 @27½
Fowls, 31-47, fresh	20 @20½	21 @22½
48-59, fresh	23 @23½	24 @24½
60 and up, fresh	@24½	@25

BUTTER AT FIVE MARKETS

Wholesale prices 92 score butter at Chicago, New York, Boston, Philadelphia and San Francisco, respectively, for week ended Thursday, Dec. 30, 1937:

Dec. 24.	25.	27.	28.	29.	30.
Holiday	Holiday	34	33½	33½	32½
"	"	35½	35½	34¾	34½
"	"	36	36	35¼	35
"	"	36	36	35¼	35
"	"	34	33½	33½	33½

Wholesale prices carlots—fresh centralized—90 score at Chicago:

Holiday	Holiday	32¾	32½	32¼	32

Receipts of butter by cities (tubs):

	This week.	Last week.	Last year.	— Since Jan. 1. — 1937.	1936.
Chicago.	31,227	Holiday	Holiday	3,218,847	Holiday
N. Y.	45,577	"	"	3,223,813	"
Boston	15,029	"	"	1,134,045	"
Phila.	15,723	"	"	974,480	"
Total	107,556	"	"	8,551,185	"

Cold storage movement (lbs.):

	In Dec. 30.	Out Dec. 30.	On hand Dec. 31.	Same day last year.
Chicago	37,803	182,129	13,717,282	Holiday
New York	91,784	73,320	2,680,130	"
Boston	320	45,062	916,295	"
Phila.	8,820	4,300	74,962	"
Total	138,787	304,871	17,388,669	"

NEWS OF THE RETAILERS

New meat market has been opened by Jesse Auker, Ridgeville, Ind.

J. Z. Thomas has let contract for erection of meat market in Sarona, Wis.

Palmetto Market, Inc., 117 E. Hancock Ave., Detroit, Mich., has been chartered with $4,000 capital, to deal in meats.

Meat and grocery store of Geo. Rupert, Tonasket, Wash., was destroyed by fire.

Mohr Brothers, 517 Castro St., San Francisco, Cal., have purchased and will reopen plant of Star Sausage Co., 275 Minna St.

Frank Kimsey has purchased meat and grocery business of S. W. Anderson, 414 Commercial Ave., Anacortes, Wash.

Pay & Save Meat Shop has been opened at 800 s.w. Front St., Portland, Ore.

N. B. Strange has been succeeded in meat business at 711 Third Ave., Renton, Wash.

Eugene Y. Dong has opened meat store at 3308 C St., Sacramento, Cal.

WHOLESALE DRESSED MEAT PRICES

Wholesale prices of Western dressed meats quoted by the U. S. Bureau of Agricultural Economics at Chicago and Eastern markets on Jan. 6, 1938.

Fresh Beef:	CHICAGO.	BOSTON.	NEW YORK.	PHILA.
STEERS, Choice:				
400-500 lbs.[1]	$13.50@14.50	.....	$13.50@15.00	.....
500-600 lbs.	13.50@15.00	.....	14.00@15.00	$14.00@15.00
600-700 lbs.	14.00@16.00	15.00@16.00	14.50@15.50	14.00@15.00
700-800 lbs.	14.50@16.50	15.50@16.50	14.50@16.00	.....
STEERS, Good:				
400-500 lbs.	12.00@13.50	.....	12.00@13.50	.....
500-600 lbs.	12.00@13.50	.....	12.00@14.00	12.50@14.00
600-700 lbs.	13.00@14.00	13.00@15.00	12.50@14.50	12.50@14.00
700-800 lbs.	13.00@14.50	13.50@15.50	13.00@14.50	.....
STEERS, Medium[1]:				
400-600 lbs.	11.00@12.00	.....	11.00@12.00	11.00@12.50
600-700 lbs.	12.00@13.00	11.50@13.00	11.00@12.50	11.50@12.50
STEERS, Common[1]:				
400-600 lbs.	10.50@11.00	.....	10.50@11.00	.....
COW:				
Choice	.....	.....	.....	.....
Good	11.00@11.50	11.00@11.50	10.50@11.50	11.00@11.50
Medium	10.50@11.00	10.00@11.00	9.50@10.50	10.50@11.00
Common (plain)	10.00@10.50	9.50@10.00	9.00@ 9.50	10.00@10.50
Fresh Veal and Calf:				
VEAL[2]:				
Choice	15.00@16.50	17.50@19.00	17.00@18.00	18.00@19.00
Good	14.00@15.00	15.50@17.50	14.50@17.00	16.00@18.00
Medium	12.00@14.00	14.00@15.50	13.00@14.50	13.00@16.00
Common (plain)	10.00@12.00	12.00@14.00	11.00@13.00	11.00@13.00
CALF[2 3]:				
Choice	.....	.....	.....	.....
Good	11.50@13.00	13.00@14.00	12.50@14.00	13.00@14.00
Medium	10.50@11.50	12.00@13.00	11.00@13.00	11.00@13.00
Common (plain)	10.00@10.50	10.50@12.00	10.00@11.50	10.00@11.00
Fresh Lamb and Mutton:				
LAMB, Choice:				
38 lbs. down	17.50@18.50	18.50@19.50	18.00@19.00	18.00@19.00
39-45 lbs.	17.00@18.00	17.00@18.50	17.00@18.00	18.00@19.00
46-55 lbs.	16.50@17.50	16.50@17.50	15.50@17.00	16.00@18.00
GOOD:				
38 lbs. down	16.50@17.50	17.50@18.50	17.00@18.00	17.00@18.00
39-45 lbs.	16.00@17.00	16.50@18.00	16.00@17.00	17.00@18.00
46-55 lbs.	15.50@16.50	15.50@17.00	15.00@16.00	15.00@17.00
Medium	15.50@16.50	16.00@17.50	15.00@17.00	16.00@17.00
Common (plain)	14.00@15.50	15.00@16.00	14.00@15.50	.....
MUTTON, Ewe, 70 lbs. down:				
Good	8.00@ 9.00	10.00@11.00	9.50@10.50	.....
Medium	7.00@ 8.00	9.00@10.00	8.50@ 9.50	.....
Common (plain)	6.00@ 7.00	8.00@ 9.00	7.50@ 8.50	.....
Fresh Pork Cuts:				
LOINS:				
8-10 lbs.	14.50@15.50	15.50@16.50	15.00@16.00	15.00@17.00
10-12 lbs.	14.00@15.00	15.50@16.50	14.50@15.50	15.00@16.50
12-15 lbs.	13.00@14.00	14.50@15.50	13.00@14.50	14.00@15.50
16-22 lbs.	12.50@13.50	13.50@15.00	12.00@13.00	13.00@14.50
SHOULDERS, N. Y. Style, Skinned:				
8-12 lbs.	12.00@13.00	.....	13.50@14.50	13.50@15.00
PICNICS:				
6- 8 lbs.	.....	13.50@14.50	.....	.....
BUTTS, Boston Style:				
4- 8 lbs.	13.50@15.00	.....	15.00@16.00	15.50@17.00
SPARE RIBS:				
Half sheets	11.00@12.00	.....	.....	.....
TRIMMINGS:				
Regular	7.50@ 8.00	.....	.....	.....

[1]Includes heifers, 300-450 lbs. and steers down to 300 lbs. at Chicago. [2]Includes sides at Boston and Philadelphia. [3]"Skin on" at New York and Chicago.

T. A. Duffy has purchased meat and grocery business of Geo. A. Sleeper, 218 State St., Marysville, Wash.

J. W. Burbach has engaged in meat business at 4732 W. Fond du Lac Ave., Milwaukee, Wis.

Lakewood Grocery & Market, Dallas, Tex., has been moved to 2106 Greenville Ave.

Henry Beckman has sold his meat and grocery business at 5612 Pacific Ave., Tacoma, Wash., to Ed. and Alice May Morck.

Brandt Meat and Grocery Store, Hamler, O., has been purchased by Howard Johnson.

R. W. East has purchased Skaggs Grocery, Yates Center, Kan., and enlarged meat department, installing new equipment and refrigerating facilities.

Accident Prevention

Points for Plant Executives to Keep in Mind in Maintaining a Clean Accident Record

Safety Education

IMPORTANCE of employe education in achieving safety in meat plant operations was stressed by safety directors at the meat packing section meetings of the National Safety Congress, held recently in Kansas City.

"Acquirement of fixed safety habits," said Philip Biel, safety director of the Cudahy Packing Co., Kansas City, "will largely do away with what is known as the human element, the uncertainty of what the employe may do next. Such safety habits do not make a machine of an employe; neither does he become a creature of habit; nor does it destroy initiative.

"When an employer tells a worker to 'hop to it' instead of 'watch your step' and an accident occurs, the employer cannot evade responsibility," said Mr. Biel in presenting the theory that an employer becomes responsible for the safety of a worker when he hires him and introduces him to hazards of a machine or industrial occupation. "The employe may have learned enough about his work to have reached the stage of rational safety thought," he continued, "but the employer is still responsible and will be until that thought becomes a fixed habit."

Personal protective equipment for meat plant employes was outlined by E. J. McCann, safety director at the Jacob E. Decker & Sons plant of Armour and Company.

Knife Injuries Reduced

While knife injuries and cuts to employes actually engaged in butchering have been reduced greatly, Mr. McCann said, protective equipment is not a cure-all for accidents and injuries. "Safety, in any industry," he stated, "is a matter of education in which the employe must be made to carry on his work safely.

"That this is true is clearly indicated by evidence that intelligent and careful men may avoid injury on dangerous work and that careless men may be injured under the safest possible conditions."

While the employer may not be to blame for accidents, workmen's compensation acts make him responsible for them, stated Clayton C. Keller, claim department of Wilson & Co., Kansas City, in pointing out that accident prevention actually pays dividends. Employers are anxious to stamp out forever the wholly unnecessary loss of life and suffering, the tremendous loss to the public and to individuals and their families, he declared. These, with economic considerations, he said, furnish adequate reason for a thorough and lasting safety program in the plant.

Meat Section Officers

A. E. Sinclair, Kingan & Co., was elected chairman of the executive committee of the meat packing, tanning and leather industries section for 1937-38, with Philip G. Rhoads, J. E. Rhoads & Sons, vice chairman, and A. A. Siereveld, E. Kahn's Sons Co., secretary. Chairman of the subcommittees are John McArdle, Armour and Company, news letter; C. W. Sloan, Swift & Company, engineering; H. G. Schaffner, Schaffner Bros. Co., membership; A. C. Michener, John Morrell & Co., posters; E. J. McCann, Armour and Company, program; Henry D. Tefft, Institute of American Meat Packers, publicity, and Walter Webb, Armour and Company, statistics.

Executive committee members at large include Glenn U. Bonser, Elk Tanning Co.; N. L. Brainard, Swift & Company; H. L. Clover, International Shoe Co.; E. E. Drews, Libby, McNeill & Libby; Maury Hopkins, Wilson & Co.; T. H. Jones, American Hair & Felt Co.; W. F. McClellan, Armour and Company; Wilson Palmer, United Shoe Machinery Corp.; R. R. Roach, Geo. A. Hormel & Co.; Edgar K. Ruth, American Oak Leather Co., and W. E. Tennery, Armour and Company.

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F. G. VOGT & SONS, INC.—PHILADELPHIA, PA.

Chicago Market Prices

WHOLESALE FRESH MEATS

Carcass Beef

Prime native steers—	Week ended Jan. 5, 1938.	Cor. week, 1937.
400- 600	@18½	19 @20
600- 800	@18½	18½ @19
800-1000	@18½	18 @18½
Good native steers—		
400- 600	@15½	17½ @18½
600- 800	@15½	17½ @18½
800-1000	@15½	17½ @18½
Medium steers—		
400- 600	@12½	16 @16½
600- 800	@12½	16½ @17
800-1000	@13	16½ @17
Heifers, good, 400-600	@13	16 @17
Cows, 400-600	@11½	10 @11
Hind quarters, choice	@25½	@25
Fore quarters, choice	@14	@15

Beef Cuts

Steer loins, prime	@43	@37
Steer loins, No. 1	@33	@35
Steer loins, No. 2	@23	@32
Steer short loins, prime	@60	@49
Steer short loins, No. 1	@46	@46
Steer short loins, No. 2	@30	@40
Steer loin ends (hips)	@21	@24
Steer loin ends, No. 2	@20	@24
Cow loins	@15	@18
Cow short loins	@19	@21
Cow loin ends (hips)	@12	@15
Steer ribs, prime	@31	@25
Steer ribs, No. 1	@23	@24
Steer ribs, No. 2	@18	@21½
Cow ribs, No. 2	@12	@12
Cow ribs, No. 3	@ 9	@10
Steer rounds, prime	@14	@16½
Steer rounds, No. 1	@15	@17
Steer rounds, No. 2	@14½	@16½
Steer chucks, prime	@13	@13½
Steer chucks, No. 1	@12	@14
Steer chucks, No. 2	@11½	@12½
Cow rounds	@12	@11½
Cow chucks	@10	@10
Steer plates	@10½	@11
Medium plates	@10½	@11
Briskets, No. 1	@17	@14
Steer navel ends	@ 9	@ 9
Cow navel ends	@ 8	@ 7½
Fore shanks	@ 9	@ 9
Hind shanks	@ 7	@ 6
Strip loins, No. 1, bnls	@59	@50
Strip loins, No. 2	@39	@45
Sirloin butts, No. 1	@27	@28
Sirloin butts, No. 2	@19	@20
Beef tenderloins, No. 1	@74	@70
Beef tenderloins, No. 2	@54	@50
Rump butts	@12	@11½
Flank steaks	@17	@22
Shoulder clods	@14	@12
Hanging tenderloins	@15	@14
Insides, green, 6@8 lbs	@17	@13
Outsides, green, 5@6 lbs	@15	@12½
Knuckles, green, 5@6 lbs.	@16½	@13

Beef Products

Brains (per lb.)	@ 9	@ 7
Hearts	@11	@10
Tongues	@19	@18
Sweetbreads	@23	@18
Ox-tail, per lb	@12	@10
Fresh tripe, plain	@ 9	@ 9
Fresh tripe, H. C	@11½	@11½
Livers	@20	@19
Kidneys, per lb	@ 9	@10

Veal

Choice carcass	@17	16	@17
Good carcass	@16	13	@15
Good saddles	@21	18	@20
Good racks	@15	12	@15
Medium racks	@12	9	@10

Veal Products

Brains, each	@12	@11½
Sweetbreads	@35	@35
Calf livers	@36	@45

Lamb

Choice lambs	@20	@15
Medium lambs	@18	@13
Choice saddles	@22	@18
Medium saddles	@20	@16
Choice fores	@18	@12
Medium fores	@16	@10
Lamb fries, per lb	@30	@30
Lamb tongues, per lb	@15	@15
Lamb kidneys, per lb	@20	@20

Mutton

Heavy sheep	@ 8	@ 6
Light sheep	@10	@ 8
Heavy saddles	@ 9	@ 8
Light saddles	@12	@10
Heavy fores	@ 7	@ 4
Light fores	@ 8	@ 6
Mutton legs	@14	@11
Mutton loins	@12	@ 8
Mutton stew	@ 7	@ 5
Sheep tongues, per lb	@12½	@12½
Sheep heads, each	@14	@10

Fresh Pork and Pork Products

Pork loins, 8@10 lbs av	@15½	@21
Picnics	@11	@14½
Skinned shoulders	@12	@16½
Tenderloins	@30	@32
Spare ribs	@11	@14½
Back fat	@10	@13
Boston butts	@14½	@20
Boneless butts, cellar trim, 2@4	@19	@27
Hocks	@10	@10
Tails	@11	@12
Neck bones	@ 4	@ 5
Slip bones	@11	@13
Blade bones	@11	@12
Pigs' feet	@ 5½	@ 5
Kidneys, per lb	@ 9	@ 9
Livers	@ 9	@ 9½
Brains	@ 9	@ 8
Ears	@ 6	@ 6
Snouts	@ 9	@ 8
Heads	@ 7½	@ 8
Chitterlings	@ 7	@ 6½

DRY SALT MEATS

Clear bellies, 14@16 lbs	@11
Clear bellies, 18@20 lbs	@10¾
Rib bellies, 25@30 lbs	@10¾
Fat backs, 10@12 lbs	@ 7¾
Fat backs, 14@16 lbs	@ 9¾
Regular plates	@ 8¼
Jowl butts	@ 7¾

WHOLESALE SMOKED MEATS

Fancy reg. hams, 14@16 lbs., parchment paper	21½ @22½
Fancy skd. hams, 14@16 lbs., parchment paper	22¼ @23¼
Standard reg. hams, 14@16 lbs., plain	20 @21
Picnics, 4@8 lbs., short shanks, plain	18 @19
Picnics, 4@8 lbs., long shank, plain	17 @18
Fancy bacon, 6@8 lbs., parchment paper	28 @29
Standard bacon, 6@8 lbs., plain	24 @25
No. 1 beef sets, smoked	
Insides, 8@12 lbs	32 @33
Outsides, 5@9 lbs	28½ @29½
Knuckles, 5@9 lbs	29 @30
Cooked hams, choice, skin on, fatted	@35
Cooked hams, choice, skinless, fatted	@36½
Cooked picnics, skin on, fatted	@26¼
Cooked picnics, skinned, fatted	@26¼

BARRELED PORK AND BEEF

Mess pork, regular	$23.50
Family back pork, 24 to 34 pieces	@24.00
Family back pork, 35 to 45 pieces	@24.00
Clear back pork, 40 to 50 pieces	@27.00
Bean pork	@20.00
Brisket pork	@24.50
Plate beef	@25.50
Extra plate beef	@26.50
Clear plate pork, 25 to 35 pieces	@19.00

VINEGAR PICKLED PRODUCTS

Pork feet, 200-lb. bbl	$16.75
Lamb tongue, short cut, 200-lb. bbl	65.00
Regular tripe, 200-lb. bbl	16.50
Honeycomb tripe, 200-lb. bbl	26.00
Pocket honeycomb tripe, 200-lb. bbl	27.00

LARD

Prime steam, cash, Bd. Trade	$ 8.30n
Prime steam, loose, Bd. Trade	8.05b
Refined lard, tierces, f.o.b. Chgo.	.10
Kettle rend., tierces, f.o.b. Chgo.	.11
Leaf, kettle rendered, tierces, f.o.b. Chicago	.11¾
Neutral, tierces, f.o.b. Chicago	.10¾
Compound, veg. tierces, c.a.f.	.09¾

OLEO OIL AND STEARINE

Extra oleo oil	10 @10½
Prime No. 2 oleo oil	8¾ @ 9¼
Prime oleo stearine, edible	7 @ 7½

VEGETABLE OILS

Crude cottonseed oil, in tanks, f.o.b. Valley points, prompt	@ 6
White deodorized, in bbls., f.o.b. Chgo.	9¼ @ 9½
Yellow, deodorized	9¼ @ 9½
Soap stock, 50% f.f.a., f.o.b. mills	1 @ 1¼
Soya bean oil, f.o.b. mills	5¾ @ 6
Corn oil, in tanks, f.o.b. mills	6¾ @ 6¾
Coconnut oil, sellers' tanks, f.o.b. coast	@ 3¾
Refined in bbls., f.o.b. Chicago	@ 9

OLEOMARGARINE

(F. O. B. CHICAGO.)

White domestic vegetable margarine	@15½
White animal fat margarine, in 1 lb. cartons, rolls or prints	@15
Puff paste (water churned)	@12½
(milk churned)	@14

DOMESTIC SAUSAGE

(Quotations cover fancy grades.)

Pork sausage, in 1-lb. carton	@24
Country style sausage, fresh in link	@19¾
Country style sausage, fresh in bulk	@17½
Country style sausage, smoked	@22½
Frankfurters, in sheep casings	@23¾
Frankfurters, in hog casings	@21¾
Bologna in beef bungs, choice	@18
Bologna in beef middles, choice	@18
Liver sausage in beef rounds	@16½
Liver sausage in hog bungs	@19
Smoked liver sausage in hog bungs	@20
Head cheese	@19
New England luncheon specialty	@22
Minced luncheon specialty, choice	@17½
Tongue sausage	@29½
Blood sausage	@19¾
Souse	@19¾
Polish sausage	@23

DRY SAUSAGE

Cervelat, choice, in hog bungs	@39
Thuringer cervelat	@20½
Farmer	@27
Holsteiner	@25
B. C. salami, choice	@34
Milano, salami, choice in hog bungs	@35
B. C. salami, new condition	@20½
Frisses, choice, in hog middles	@32
Genoa style salami, choice	@42
Pepperoni	@30
Mortadella, new condition	@18½
Capicola	@44
Italian style hams	@34
Virginia hams	@44

SAUSAGE IN OIL

Bologna style sausage, in beef rounds— Small tins, 2 to crate	$6.00
Frankfurt style sausage, in sheep casings— Small tins, 2 to crate	7.50
Smoked link sausage, in hog casings— Small tins, 2 to crate	6.75

SAUSAGE MATERIALS

(F. O. B. CHICAGO.)

Regular pork trimmings	7½ @ 8
Special lean pork trimmings	@12½
Extra lean pork trimmings	@14½
Pork cheek meat	8 @ 8½
Pork hearts	@ 6
Pork livers	@ 6
Native boneless bull meat (heavy)	@13¾
Shank meat	@11½
Boneless chucks	@12½
Beef trimmings	@10
Beef cheeks (trimmed)	@ 8½
Dressed canners, 350 lbs. and up	8½ @ 8¾
Dressed cutter cows, 400 lbs. and up	9¼ @ 9½
Dr. bologna bulls, 600 lbs. and up	10½ @10¾
Pork tongues, canner trim, S. P.	@16

CURING MATERIALS

	Cwt.
Nitrite of soda (Chgo. w'hse stock): In 425-lb. bbls., delivered	9 9.00
Saltpeter, less than ton lots:	
Dbl. refined granulated	6.90
Small crystals	7.90
Medium crystals	8.25
Large crystals	8.65
Dbl. refd. gran. nitrate of soda	8.75
Salt, per ton, in minimum car of 80,000 lbs. only, f.o.b. Chicago:	
Granulated	7.20
Medium, undried	9.70
Medium, dried	10.20
Rock	6.60
Sugar—	
Raw, 96 basis, f.o.b. New Orleans	@3.20
Second sugar, 90 basis	None
Standard gran., f.o.b. refiners (2%)	@4.75
Packers' curing sugar, 100 lb. bags, f.o.b. Reserve, La., less 2%	@4.25
Packers' curing sugar, 250 lb. bags, f.o.b Reserve, La., less 2%	@4.05
Dextrose, in car lots, per cwt	@3.81

(Continued on page 67.)

PURE VINEGARS
A. F. CALLAHAN & COMPANY
2407 SOUTH LA SALLE STREET
CHICAGO, ILL.

BEFORE YOU BUY
Investigate WHAT THESE PACKERS OFFER

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GOOD FOOD

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Austin, Minnesota

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Union Stock Yards Chicago, Ill.

Dressed Hogs
Dressed Beef

Boneless Beef Cuts • Sausage Material

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from the Land O'Corn

BLACK HAWK HAMS AND BACON
PORK - BEEF - VEAL - LAMB
Straight and Mixed Cars of Packing House Products
THE RATH PACKING CO. WATERLOO, IOWA

Hunter Packing Company
East St. Louis, Illinois

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410 W. 14th Street

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F. C. Rogers, Inc., Philadelphia

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HAMS • BACON • LARD • SAUSAGE
CANNED MEATS • OLEOMARGARINE
CHEESE • BUTTER • EGGS • POULTRY

A full line of Fresh Pork • Beef • Veal Mutton and Cured Pork Cuts

Hides • Digester Tankage

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PORK AND BEEF PACKERS
Main Plant, *Indianapolis* Established 1845

NATURE AND HUMAN SKILL combine to give Superb Quality in these imported canned Hams.

Try a Case Today

AMPOL,
380 Second Ave., New York, N. Y.

Partridge
PORK PRODUCTS—SINCE 1876
The H. H. MEYER PACKING CO.
Cincinnati, Ohio

Wilmington Provision Company
TOWER BRAND MEATS
Slaughterers of Cattle, Hogs, Lambs and Calves
U. S. GOVERNMENT INSPECTION
WILMINGTON DELAWARE

Chicago Markets

(Continued from page 65.)

SPICES

(Basis Chicago, original bbls., bags or bales.)

	Whole. Per lb.	Ground. Per lb.
Allspice, Prime	16½	18
Resifted	17	18½
Chili Pepper, Fancy	..	21
Chili Powder, Fancy	..	20
Cloves, Amboyna	27	31
Madagascar	18	21½
Zanzibar	20	23½
Ginger, Jamaica	18½	20
African	17	19
Mace, Fancy Banda	65	70
East India	60	65
E. I. & W. I. Blend	..	60
Mustard Flour, Fancy	..	22½
No. 1	..	15
Nutmeg, Fancy Banda	..	26
East India	..	22
E. I. & W. I. Blend	..	19½
Paprika, Extra Fancy	..	29
Fancy	..	28
Hungarian, Fancy	..	24
Pepina Sweet Red Pepper	..	26½
Pimiexo (220-lb. bbls.)	..	25½
Pepper, Cayenne	..	23
Red Pepper, No. 1	..	18
Pepper, Black Aleppy	10	11½
Black Lampong	6¾	8
Black Tellicherry	10	11½
White Java Muntok	11	12½
White Singapore	10½	12
White Packers	..	11½

SEEDS AND HERBS

	Whole.	Ground for Sausage.
Caraway Seed	9	.11
Celery Seed, French	19½	23½
Cominos Seed	11½	14
Coriander Morocco Bleached	10	..
Coriander Morocco Natural No. 1	8½	10½
Mustard Seed, Cal. Yellow	9½	12½
American	8½	11½
Marjoram, French	22½	25½
Oregano	15	18
Sage, Dalmatian Fancy	8½	10
Dalmatian No. 1	8	9½

SAUSAGE CASINGS

(F. O. B. CHICAGO.)

(Prices quoted to manufacturers of sausage.)

Beef casings:	
Domestic rounds, 180 pack	@.16
Domestic rounds, 140 pack	@.27
Export rounds, wide	@.35
Export rounds, medium	@.22
Export rounds, narrow	@.38
No. 1 weasands	@.05
No. 2 weasands	@.03
No. 1 bungs	@.11
No. 2 bungs	@.08
Middles, regular	@.37
Middles, select, wide, 2@2½ in.	@.45
Middles, select, extra wide, 2½ in. and over	@.80
Dried bladders:	
12-15 in. wide, flat	.65
10-12 in. wide, flat	.55
8-10 in. wide, flat	.35
6- 8 in. wide, flat	.25
Hog casings:	
Narrow, per 100 yds	2.40
Narrow, special, per 100 yds	2.30
Medium, regular	1.90
English medium	1.75
Wide, per 100 yds	1.50
Extra wide, per 100 yds	1.15
Export bungs	.25
Large prime bungs	.20
Medium prime bungs	.14
Small prime bungs	.11
Middles, per set	.18
Stomachs	.09

New York Market Prices

LIVE CATTLE

Steers, medium to good	$ 8.50@ 9.00
Cows, common to medium	5.50@ 6.50
Cows, low cutter to cutter	4.00@ 5.50
Bulls, sausage	7.00@ 7.25
Bulls, cutter to medium	5.00@ 6.75

LIVE CALVES

Vealers, good to choice	$ @14.00
Vealers, medium	10.00@12.00
Vealers, cull and common	6.00@ 9.50
Calves, common and medium	6.25@ 7.00

LIVE HOGS

Hogs, good to choice, 150-205 lb.	$ @ 8.75

LIVE LAMBS

Lambs, good	$ @ 9.75

DRESSED BEEF

City Dressed.

Choice, native, heavy	20 @23
Choice, native, light	19 @23
Native, common to fair	15 @18

Western Dressed Beef.

Native steers, 600@800 lbs.	17 @21
Native choice yearlings, 440@600 lbs.	16 @20
Good to choice heifers	14 @16
Good to choice cows	11 @13
Common to fair cows	9 @10
Fresh bologna bulls	11½@12½

BEEF CUTS

	Western.	City.
No. 1 ribs	28 @32	30 @34
No. 2 ribs	24 @27	24 @28
No. 3 ribs	17 @22	20 @23
No. 1 loins	45 @48	44 @50
No. 2 loins	35 @40	36 @42
No. 3 loins	25 @28	30 @34
No. 1 hinds and ribs	20 @23	27 @28
No. 2 hinds and ribs	16 @20	18 @21
No. 1 rounds	14 @16	14 @15
No. 2 rounds	@13	12 @13
No. 3 rounds	11 @13	11 @12
No. 1 chucks	13 @14	14 @16
No. 2 chucks	12 @13	13 @14
No. 3 chucks	11 @12	11 @12
Bolognas	12½@13½	
Rolls, reg. 6@8 lbs. av.	23 @25	
Rolls, reg. 4@6 lbs. av.	18 @20	
Tenderloins, 4@6 lbs. av.	50 @60	
Tenderloins, 5@6 lbs. av.	50 @60	
Shoulder clods	16 @18	

DRESSED VEAL

Good	17½@18½
Medium	16½@17½
Common	15 @16½

DRESSED SHEEP AND LAMBS

Lambs, spring, prime	18 @19
Lambs, spring, good	17 @18
Lambs, 38 lbs. down	16 @17
Sheep, good	9 @11
Sheep, medium	7 @ 9

DRESSED HOGS

Hogs, good and choice (90-140 lbs.)	$12.75@13.25

FRESH PORK CUTS

Pork loins, fresh, Western, 10@12 lbs.	@16½
Pork tenderloins, fresh	@33
Pork tenderloins, frozen	@35
Shoulders, Western, 10@12 lbs. av.	@14
Butts, boneless, Western	@27
Butts, regular, Western	@17
Hams, Western, fresh, 10@12 lbs. av.	@20
Picnic hams, West. fresh, 6@8 lbs. av.	@15
Pork trimmings, extra lean	@18
Pork trimmings, regular 50% lean	@11
Spareribs	@15

SMOKED MEATS

Regular hams, 8@10 lbs. av.	24 @25
Regular hams, 10@12 lbs. av.	23 @24
Regular hams, 12@14 lbs. av.	22½@23½
Skinned hams, 10@12 lbs. av.	23½@24½
Skinned hams, 12@14 lbs. av.	22½@23½
Skinned hams, 16@18 lbs. av.	21½@22½
Skinned hams, 18@20 lbs. av.	21 @22
Picnics, 4@6 lbs. av.	18 @19
Picnics, 6@8 lbs. av.	17 @18
City pickled bellies, 8@12 lbs. av.	20 @21
Bacon, boneless, Western	27½@28
Bacon, boneless, city	26½@27
Rollettes, 8@10 lbs. av.	21 @22
Beef tongue, light	@23
Beef tongue, heavy	@24

FANCY MEATS

Fresh steer tongues, untrimmed	16c a pound
Fresh steer tongues, l. c. trimmed	28c a pound
Sweetbreads, beef	35c a pound
Sweetbreads, veal	70c a pair
Beef kidneys	14c a pound
Mutton kidneys	4c each
Livers, beef	29c a pound
Oxtails	18c a pound
Beef hanging tenders	30c a pound
Lamb fries	12c a pair

BUTCHERS' FAT

Shop Fat	$1.75 per cwt.
Breast Fat	2.50 per cwt.
Edible Suet	4.00 per cwt.
Inedible Suet	3.00 per cwt.

GREEN CALFSKINS

	5-9	9½-12½	12½-14	14-18	18 up
Prime No. 1 Veals	12	1.70	1.75	1.80	1.95
Prime No. 2 Veals	11	1.50	1.55	1.60	1.65
Buttermilk No. 1	9	1.40	1.45	1.50	....
Buttermilk No. 2	8	1.25	1.30	1.35	....
Branded Gruby	6	.70	.80	.85	.90
Number 3	6	.70	.80	.85	.90

BONES AND HOOFS

	Per ton.
Round shins, heavy, delivered basis	$70.00@75.00
light, delivered basis	60.00@65.00
Flat shins, heavy, delivered basis	@60.00
light, delivered basis	@55.00
Thighs, blades and buttocks	@52.50
White hoofs	@65.00
Black and striped hoofs	@40.00

COOPERAGE

(Prices at Chicago)

Ash pork barrels, black hoops	$1.52½@1.55
Ash pork barrels, galv. hoops	1.62½@1.65
Oak pork barrels, black hoops	1.52½@1.55
Oak pork barrels, galv. hoops	1.62½@1.65
White oak ham tierces	2.42½@2.45
Red oak lard tierces	2.12½@2.15
White oak lard tierces	2.22½@2.25

S. OPPENHEIMER & CO.

Incorporated in Illinois

Natural SAUSAGE CASINGS

610 ROOT ST., CHICAGO 470 WASHINGTON ST., NEW YORK

Classified ADVERTISEMENTS

Advertisements on this page, $3.00 an inch for each insertion. Position Wanted, special rate, $2.00 an inch for each insertion. Minimum Space 1 inch, not over 48 words, including signature or box number. No display. Remittance must be sent with order.

Position Wanted

Mechanical Engineer

Young graduate mechanical engineer experienced in packinghouse equipment desires position with packer. W-989, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

Sausagemaker

Sausage foreman and butcher can take full charge of kitchen. Makes all kinds of sausage and meat loaves. Chicago experience. Will go anywhere. References. Peter LaBouve, 1524 Frontier, Chicago, Ill. Lin. 8278.

Superintendent

Employed, desires change, good reason. Excellent references previous and present employers. 25 years' western, mid-western and eastern experience, all departments. Ten years superintendent. Expert bologna, curing, smoking, killing, cutting departments. Proven formulas, modern cures. Now in East. W-988, THE NATIONAL PROVISIONER, 300 Madison Ave., New York City.

Hog Buyer

Experience for sale. Are you looking for order buyer with wealth of experience? Such a man is available on short notice. He has worked for reliable packers for over 20 years, 16 of which were spent with one concern. Now operating on commission but would like connection with reputable packer who can use his experience to good advantage. Location secondary. Prime interest is connection with packer worthy of experience offered. W-983, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

Men Wanted

Distributors and Salesmen

Territories open for live producers, those now contacting or who have previously sold to provision manufacturers to market outstanding product that is in great demand, a combination binder, improver, and seasoner of provision products. Full time or side line. Exclusive territory. W-995, THE NATIONAL PROVISIONER, 300 Madison Ave., New York City.

Beef Superintendent

Wanted superintendent capable of taking full charge of small beef killing plant. Must be practical man from ground up and able to build efficient organization. W-993, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago.

Chemist

Meat packing company has opening for graduate chemist whose major experience has been in meat packing field. All applicants are requested to give complete information regarding themselves in their reply. W-994, THE NATIONAL PROVISIONER, 300 Madison Ave., New York City.

Men Wanted

Agents

Agents wanted by leading manufacturer of seasonings and curing materials for New England states, Southern states, West Central states. Give full particulars in first letter. W-987, THE NATIONAL PROVISIONER, 300 Madison Ave., New York City.

Salesmen

Established seasonings manufacturing concern will make attractive proposition to limited number of salesmen calling on sausage manufacturing trade, and butchers curing their own meats. Liberal commissions. W-990, THE NATIONAL PROVISIONER, 300 Madison Ave., New York City.

Refinery Man

Wanted, experienced lard and inedible man capable of foremanship in packing plant located in southern Ohio. Apply in own handwriting giving age, experience and references. W-962, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

Equipment for Sale

For Sale

8 Double low frame beef hoists Allbright-Nell No. 77 with friction wheels 52-in. x 10-in. and 40-in. x 10-in. FS-986, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

Used Sausage Machinery

For sale, No. 43 "Buffalo" mixer, $90; No. 43-B "Buffalo" silent cutter, $200; 200-lb. Randall stuffer, $100. Excellent condition and will be guaranteed. Berks Packing Co., Inc., Reading, Pa.

Used Packinghouse Equipment

For sale, 24-ton Frick ice machine with steam engine. Brownell boiler, Gem City boiler, lard balance scale, cattle scale, track scales, pumps, lard cooking tank, blowers, tallow tanks, other items. For list and full particulars write to Geo. H. Alten, P. O. Box 426, Lancaster, Ohio.

Used Machinery

For sale:

8 to 10 aluminum ham boilers, $3.00 ea.

6 aluminum loaf boilers, $2.50 ea.

Trolley meat hooks, $.35 ea.

38-in. silent cutter, $175.00.

27-in. silent cutter, $75.00.

Large and small grinders, $75.00 ea.

No. 900 Randall scrapple agitator, $100.

CHAS. ABRAMS

1422 South 5th St., Philadelphia, Pa.

Equipment for Sale

Harrington Lard Fillers

For sale, 3 Harrington lard filling units; one 1-lb. size, one 4-lb., 8-lb. size, and one for larger packages. FS-907, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

M & M Hog

For sale, one CRE Mitts & Merrill hog, No. 15, with 28-in. hopper, driven by 100 h.p. motor, suitable for grinding cracklings, tankages, shop fat and bones, etc. Machine in good condition and priced right. FS-941, THE NATIONAL PROVISIONER, 407 S. Dearborn St., Chicago, Ill.

Used Equipment for Sale

3 Anderson No. 1 Oil Expellers, motor driven, with 15-H.P., AC motors, complete with tempering apparatus; 2 Anderson RB Expellers; two 4 ft. x 9 ft. Mechanical Mfg. Co. Lard Rolls; 1 Allbright Nell 2½ ft. x 5 ft. Jacketed Dryer; 3 Bartlett & Snow Jacketed Digesters or Tankage Dryers 10' dia.; one 24 in. x 20 in. Type "B" Jeffrey Hammer Mill; one 24 in. x 16 in. Gruendler Hammer Mill; 2 Jay-Bee Hammer Mills, No. 2, No. 3, for Cracklings; 2 Mechanical Mfg. Co. Double Arm Meat Mixers; 1 Buffalo No. 23 Silent Cutter; 1 No. 41 Enterprise Meat Chopper; 1 "Boss" No. 166 Meat Chopper. Miscellaneous: Cutters, Grinders, Melters, Cookers, Rendering Tanks, Hydraulic Presses, Kettles, Pumps, etc. What have you for sale? Send us a list.

CONSOLIDATED PRODUCTS COMPANY
14-19 Park Row, New York, N. Y.
Shops and Plant
331 Doremus Ave., Newark, N. J.

Equipment Wanted

Sanders Grinder

Wanted, second-hand Sanders 150-chain drive meat grinder. Must be in good condition. General, 216 Van Brunt St., Brooklyn, N. Y.

Plant for Sale

Packing Plant

For sale, small, modern packing plant in rich agricultural district, fully equipped. Write or wire Norman W. Peters, Receiver, Tiffin, Ohio.

Business Opportunities

Sell or Lease Meat Market

Fully equipped wholesale and retail meat market and sausage room. Brick building. Built-in 14x14x12 cooler with trackage, Lipman ammonia ice machine, new 12-ft. meat display case. Good location, going business, money maker. Sell fixtures, lease building or will consider leasing both. Poor health reason for selling. Frank Stupka, 1343 W. Main St., Oklahoma City, Okla.

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J. J. HARRINGTON & COMPANY

City Dressed Beef, Lamb and Veal, Poultry

Oleo Oils	Stock Foods	Pulled Wool	Calf Skins
Stearine	Calf Heads	Pickled Skins	Horns
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3 Rue Laguerre, Shanghai, CHINA

Exporters of Hog Casings

Enquiries Invited

FRANK A. JAMES

21-23 FARRINGDON ROAD, LONDON, E. C. 1

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We are large Buyers all the year round of all grades of Hog Casings

Cable Offers: - - C. I. F. LONDON

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Sausage Casings

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in Great Britain

communicate with

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Broker

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is Finer Tasting . . .
in Natural Casings

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CASINGS CORPORATION

4021 Normal Ave., Chicago, Illinois

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PATENT SEWED CASINGS

Manufactured Under Sol May Methods
by the PIONEERS
of Sewed Sausage Casings

HOG BUNGS—HOG BUNG ENDS—BEEF MIDDLES

PATENT CASING COMPANY

617-23 West 24th Place Chicago, Illinois

THE CASING HOUSE

BERTH. LEVI & CO., INC.

ESTABLISHED 1882

NEW YORK CHICAGO LONDON
BUENOS AIRES AUSTRALIA WELLINGTON

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The firms listed here are in partnership with you. The products and equipment they manufacture and the services they render are designed to help you do your work more efficiently, more economically and to help you make better products which you can merchandise more profitably. Their advertisements offer opportunities to you which you should not overlook.

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ANCO NO. 600 ALL JACKETED LAABS COOKERS

Over 860 installations of ANCO Laabs Sanitary Rendering Cookers and Systems in operation throughout the world today furnish proof of their superior construction and operation.

The great care that has been taken in designing ANCO Cookers has made them both safe and economical to operate. The latest design features the jacketed head shells which slightly increase the capacities and shorten the cooking time by exposing more heating surface to the product. Another exclusive feature of the ANCO Cookers is the 3 point paddle suspension obtained by mounting specially designed machined paddles on machined hexagon shafts.

For 14 years, "Laabs" has been the "World's Foremost Rendering Process," and there is no doubt that ANCO Laabs Sanitary Rendering Cookers will make a profit for you just as well as they have for the many present users.

THE ALLBRIGHT-NELL CO.

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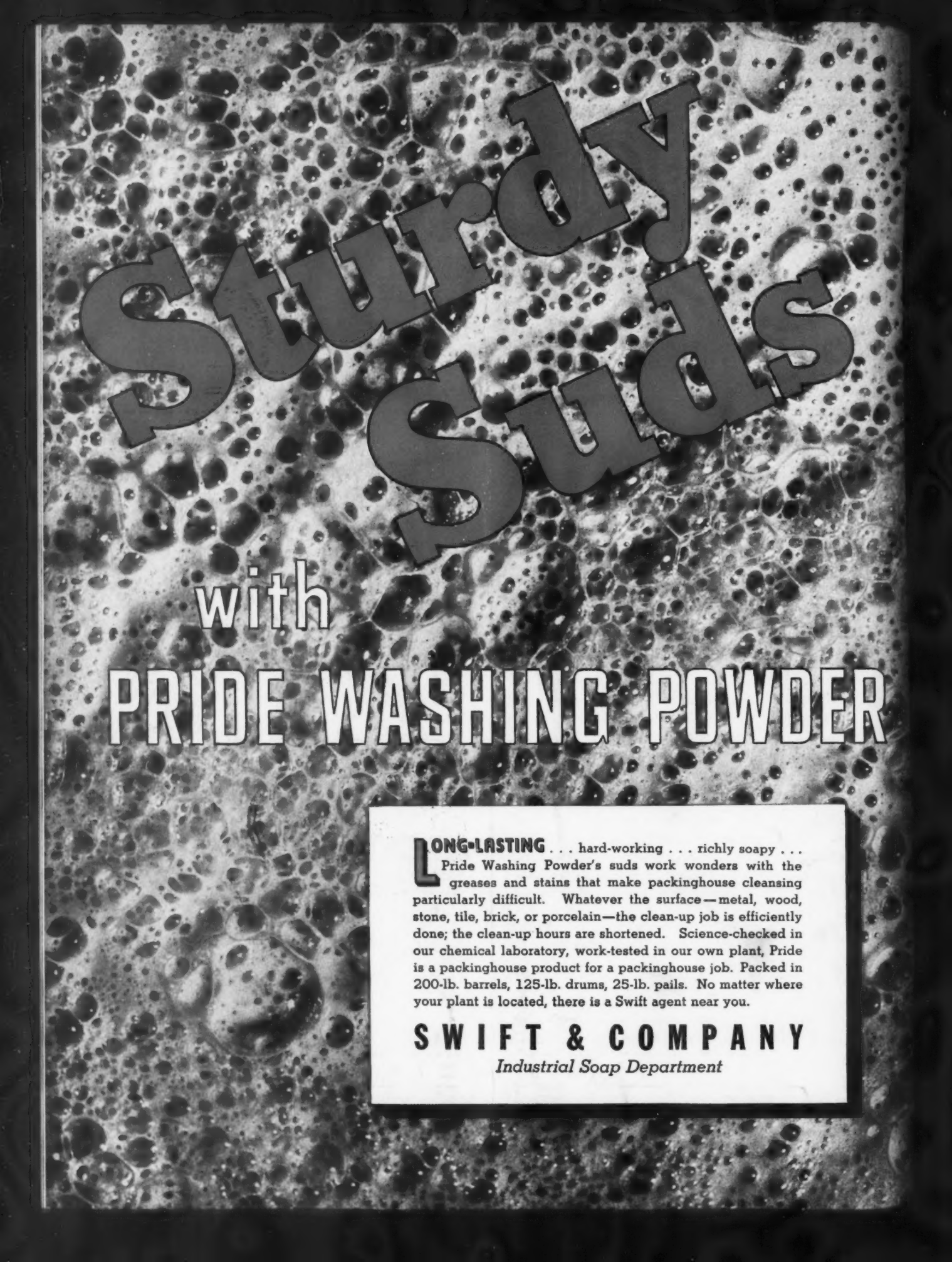
New York, N. Y.

5323 S. Western Boulevard
Chicago, Ill.

111 Sutter Street
San Francisco, Calif.

LAABS PATENTS: *United States Patents* 1,317,675. 1,578,245, 1,630,124 *and* 1,761,480; *Great Britain, No.* 253,952; *Australia, No.* 2,279; *France, No.* 617,978; *Argentina, No.* 26,749; *Canada, No.* 277,703; *Uruguay, No.* 2,234; *Holland, No.* 19,681; *Germany, No.* 511,131; *Brazil, No.* 18,817; *Other U. S. and Foreign Patents Pending.*



LONG-LASTING . . . hard-working . . . richly soapy . . . Pride Washing Powder's suds work wonders with the greases and stains that make packinghouse cleansing particularly difficult. Whatever the surface—metal, wood, stone, tile, brick, or porcelain—the clean-up job is efficiently done; the clean-up hours are shortened. Science-checked in our chemical laboratory, work-tested in our own plant, Pride is a packinghouse product for a packinghouse job. Packed in 200-lb. barrels, 125-lb. drums, 25-lb. pails. No matter where your plant is located, there is a Swift agent near you.

SWIFT & COMPANY

Industrial Soap Department